

# Rock Products

DEVOTED TO  
Concrete and Manufactured  
Building Materials

Volume XI.

CHICAGO, ILL., SEPTEMBER 22, 1911.

Number 3.

## CAROLINA PORTLAND CEMENT COMPANY

We are the largest distributors of Portland Cement, Lime Plaster, Fire-brick and General Building Material in the Southern States, and have stocks of Standard Brands at all of the Atlantic and Gulf Seaports, and at our interior mills and warehouses, for prompt and economical distribution to all Southern territory. Write for our delivered prices anywhere. Also Southern agents for the "Dehydrated" waterproofing material. "Universal," "Acme" and "Electroid" Brands Ready Roofing. Get our prices.

Charleston, S. C. Birmingham, Ala. Atlanta, Ga. New Orleans, La.

## DEXTER Portland Cement

THE NEW STANDARD

Sole Agents SAMUEL H. FRENCH & CO. Philadelphia



## UNION MINING COMPANY

Manufacturers of the Celebrated

### MOUNT SAVAGE FIRE BRICK

GOVERNMENT STANDARD

DEVOTE a special department to the manufacture of Brick particularly adapted both physically and chemically to

### Lime Kiln and Cement Kiln Construction

Large stock carried. Prompt shipments made. Write for quotations on Standard and Special shapes, to

**UNION MINING CO.,**  
Mount Savage, Md.

CAPACITY, 60,000 PER DAY.  
ESTABLISHED 1841.



## Phoenix Portland Cement

UNEXCELLED FOR ALL USES.  
Manufactured by  
**PHOENIX PORTLAND CEMENT CO.**  
NAZARETH, PA.

Sole Selling Agent, WILLIAM G. HARTRANFT CEMENT CO.  
Real Estate Trust Building, PHILADELPHIA, PENNSYLVANIA.

## Ottawa Silica Co.'s Washed White Flint Sand

Is used for sawing stone in more than a dozen states. Cuts more and lasts longer than any other sand on the market. Unexcelled for Roofing, Facing Cement Blocks, White Plaster, etc. Freight rates and prices on application.

**OTTAWA SILICA CO.,** Ottawa, Ill.



FOR GRIFFIN  
TUBE AND  
BALL MILLS

Branches:

## CHICAGO BELTING CO.

PURE OAK TANNED LEATHER BELTING

Send for Our Illustrated Catalog

111 North Green St., CHICAGO

NEW YORK

PHILADELPHIA

NEW ORLEANS

PORTLAND, OREGON

FOR  
DAMP  
PLACES



Capacity, 3000 barrels daily

## HARBISON-WALKER LIME AND CEMENT KILN LININGS

YOU know what the linings for your cement and lime kilns cost per thousand brick but do you know how much per ton output? That is the cost that is vital, that's why we are anxious you should know. Write us.

**Harbison-Walker Refractories Co.**  
PITTSBURGH :: PENNSYLVANIA

HIGHEST GRADE  
PORTLAND CEMENT  
MANUFACTURED



CAPACITY  
1,000,000 BARRELS  
YEARLY

This Front Seat  
FOR SALE

A Chance to Secure Space on Our Front Cover Will Not Occur Again in Years

## The Ironton Portland Cement Co.

Manufacturers of the  
Celebrated Limestone Brand of Portland Cement

Used by the Railroads in Kentucky, Ohio, West Virginia, and Virginia during the past five years. Cement as finely ground as any on the market. Guaranteed to pass all the standard specifications.

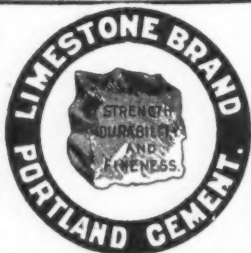
Plant located at Ironton, O., within easy access to seven States, namely, Ohio, Indiana, Kentucky, West Virginia, Virginia, Tennessee and North Carolina.

Shipments via the N. & W. Ry., C. & O. Ry., C. H. & D. Ry., D. T. & I. Ry., or Ohio River.

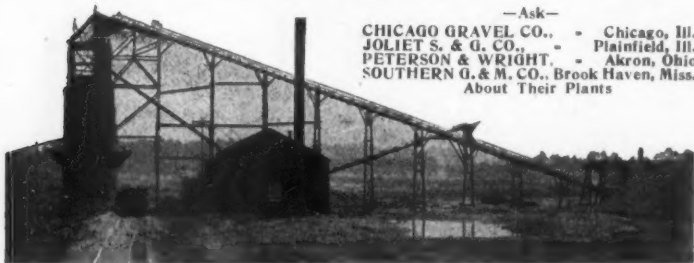
Write for Prices

## The Ironton Portland Cement Co.

Ironton, Ohio



## GRAVEL WASHING PLANTS



Stone Crushing Cement and Power Plants

—Ask—  
CHICAGO GRAVEL CO., - Chicago, Ill.  
JOLIET S. & G. CO., - Plainfield, Ill.  
PETERSON & WRIGHT, - Akron, Ohio  
SOUTHERN U. & M. CO., - Brook Haven, Miss.  
About Their Plants

J. C. Buckbee Company, Engineers, CHICAGO

ONE GRADE—ONE BRAND

## Alpha Portland Cement

Best in the World for  
Sidewalks

Write for our Handsomely Illustrated Book. Sent Free.

General Offices: No. 7 Centre Square, EASTON, PA.

—SALES OFFICES:—

The Oliver Bldg., PITTSBURGH.  
Builders Exchange, BALTIMORE.  
Marquette Building, CHICAGO.  
Harrison Building, PHILADELPHIA.

Builders Exchange, BUFFALO  
Board of Trade Bldg., BOSTON.  
Hudson Terminal Bldg., N. Y.  
Nat'l Bank Bldg., SAVANNAH, GA.



"THE BEST IS NONE TOO GOOD"  
**HIGHEST GRADE of  
Portland Cement**

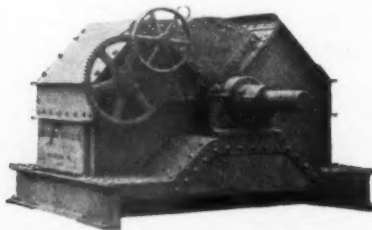
Every Barrel Absolutely Uniform.

R. R. facilities especially adapted  
for prompt shipments in  
the northwest.

Capacity 1,500,000 bbls. Yearly.

**NORTHWESTERN STATES PORTLAND CEMENT COMPANY**  
MASON CITY, IOWA

## "PENNSYLVANIA" HAMMER CRUSHERS



For Pulverizing Lime-  
stone, Lime, Cement Rock,  
Marl, Shale, Etc.

Main frame of steel: "Ball and Socket" Self aligning Bearings; forged Steel Shaft; Steel Wear Liners; Cage adjustable by hand wheel while Crusher is running. No other Hammer Crusher has such a big Safety Factor.

**PENNSYLVANIA CRUSHER CO.**  
Philadelphia  
New York Pittsburgh

## Good Cement Never Fails

You sometimes hear of concrete jobs that have failed because either the cement is poor or the concrete is improperly mixed.

## LEHIGH Portland Cement

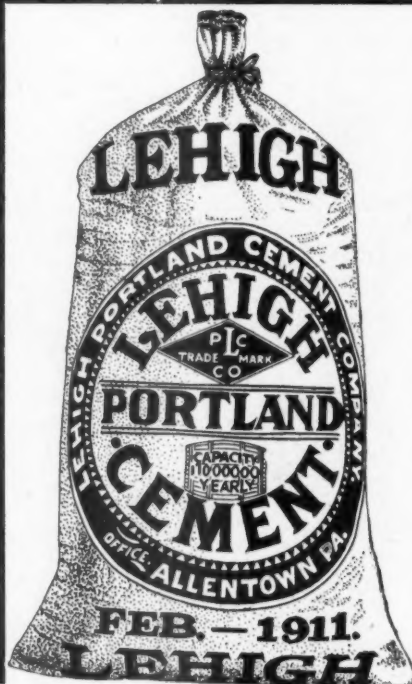
if properly mixed never fails because in its manufacture the most infinite care and watchfulness are employed at every stage. The work

is carried on by a competent staff of men with years of practical experience and in plants where the machinery and general equipment are thoroughly efficient and up to date. Frequent tests are also made by expert chemists and as a result the fineness, strength, uniformity and color of LEHIGH PORTLAND CEMENT are unexcelled.

**THE LEHIGH PORTLAND CEMENT CO.**

Head Office: ALLENTOWN, PA.

Main Western Office: CHICAGO, ILL.



## YOU CAN'T FADE 'EM

There's one "best" in every line, but that is not always best for everyone concerned. In the building trades

## Ricketson's Mineral COLORS

are acknowledged to be the best choice for everybody. Best for the architect because purest. Best for the contractor because they go farther. Best for the owner because they never change their color.

For Mortar, Brick, Cement, Stone, Etc.  
Red, Brown, Buff, Purple and Black

**RICKETSON MINERAL PAINT WORKS**

**MILWAUKEE, WIS.**

Tell 'em you saw it in ROCK PRODUCTS





JOHN R. MORRON  
NEW YORK, N. Y.

Sup  
Au  
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Ce  
for



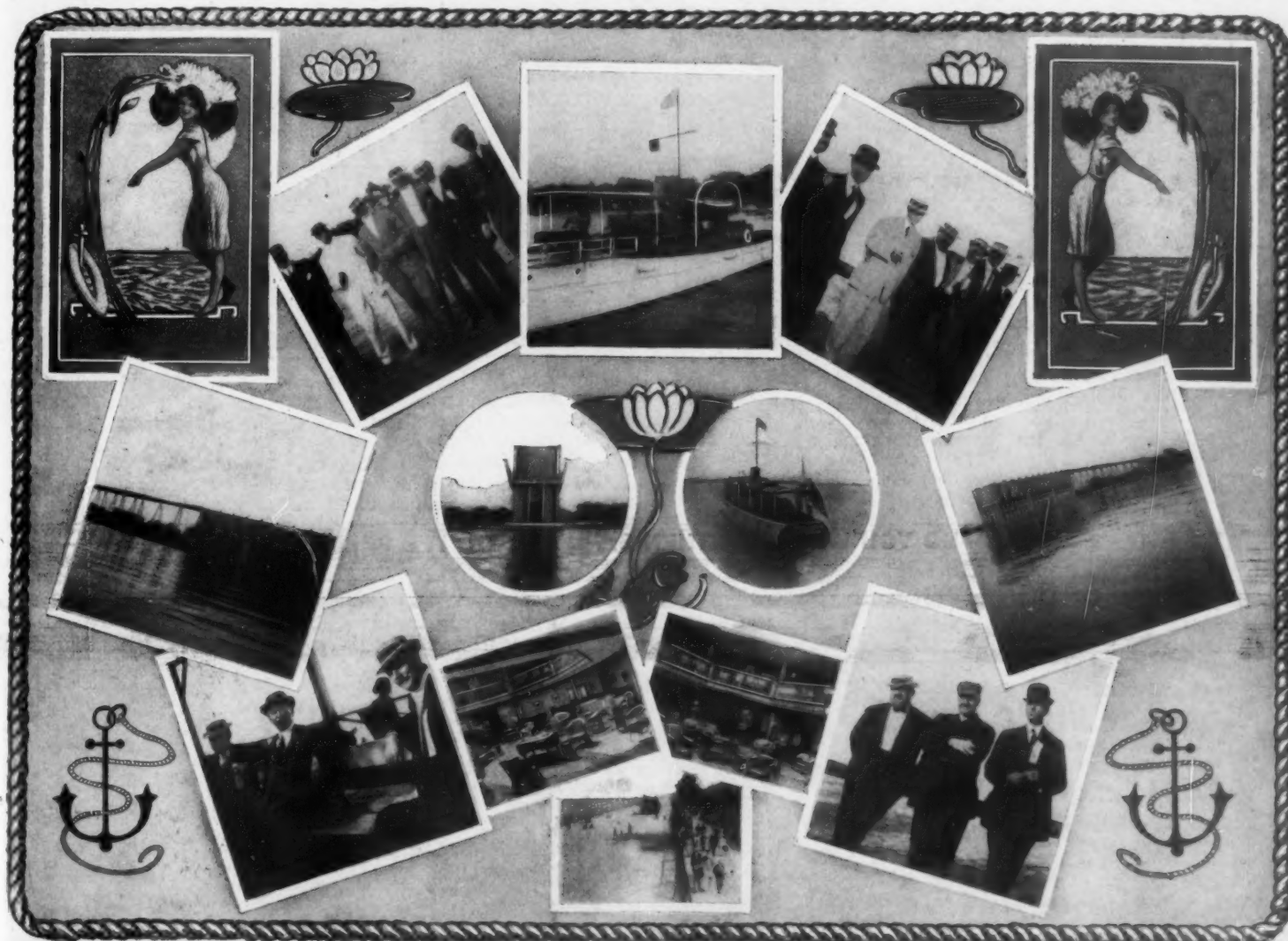
**DEVOTED TO**

## Concrete and Manufactured Building Materials

### Number 3

**Fifth Annual Convention at the Breakers is Marked by an Unusually Large Attendance and Great Enthusiasm.**

[Continued on Page Page 28]



SOME SNAP SHOTS OF THE RECENT CONVENTION OF THE OHIO BUILDERS' SUPPLY ASSOCIATION AT CEDAR POINT, OHIO.

# Power & Mining Machinery Co.

MILWAUKEE, WIS. U. S. A.

District Offices:

Chicago

New York City

Atlanta

El Paso

San Francisco

"Half the size,  
Half the weight;  
Half the height,  
Half the freight."

**TO WHICH MIGHT ALSO BE ADDED:**

"Half the efficiency,  
Half the life;  
Half the success,  
Double the strife."

All the above at the same price of a real crusher, too, such as the

## "McCULLY CRUSHER"



### McCULLY CRUSHERS ARE NOT SOLD BY RHYME BUT BY REASON

By reason of their unequaled capacity and wearing qualities on rock and ore of any degree of hardness, and **WITHOUT MELTING ANY BABBIT.**

By reason of not requiring pumps for circulating the oil.

By reason of not requiring any cooling system for cooling the oil.

By reason of their unequaled efficiency under any and all conditions of service.

By reason of their unequaled economy due to minimum power, oil and repairs required.

By reason of many other "reasons",—too numerous to mention here, but which are contained in our new Catalog No. 4-R which is just off the press.

**DO YOU WANT IT? THEN SEND FOR IT. IT'S FREE.**

## Principal Products

ROCK CRUSHING MACHINERY

MINING AND SMELTING MACHINERY

CEMENT-MAKING MACHINERY

WOOD IMPREGNATING PLANTS

POWER TRANSMITTING MACHINERY

LOOMIS-PETTIBONE GAS GENERATORS

SUCTION GAS PRODUCERS

*Write for Catalogs on any of Above, Mentioning this Journal.*



# "Forgot to Oil It—"

**There Is Only  
One Crusher  
with an Automatic  
Oiling System**

The oft-repeated story of the man whose plant is out of order. Don't rely on memory, and you'll avoid expensive shut-downs. In the Symons Breaker, lubrication is automatic. The oil pump's memory never fails. Read the rest.

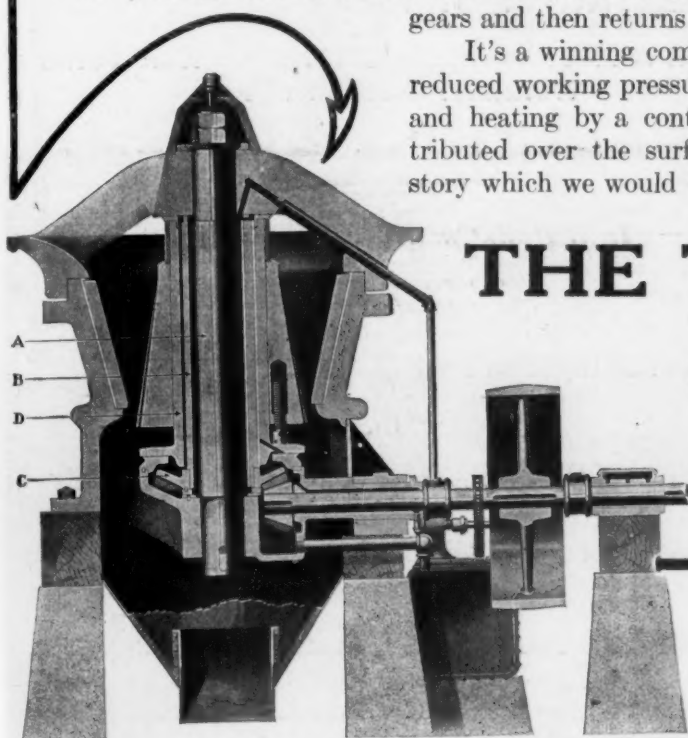
*The Crusher's Life Blood is Oil.*

Rock breakers work under most trying conditions, continually enveloped in a cloud of dust. It is very difficult, even with the "tightest fit," to exclude dirt from the running parts. The bearings are subject to immense pressures, very irregularly applied. When you add to these unfavorable conditions the further danger of careless supervision, any mechanic will admit the vital importance, to the practical quarryman, of the automatic oiling system peculiar to the

## SYMONS CRUSHER

The oil pressure excludes the dirt. Where oil cannot get out, dirt cannot get in. The steady flow of oil (volume variable to suit conditions) washes the bearings clean, smooth and cool, immerses the gears and then returns to the tank to be used again.

It's a winning combination—only two big bearings, carrying a greatly reduced working pressure, guarded from dirt and protected from wearing and heating by a continuous oil-flow, with the working load evenly distributed over the surface of the long eccentric. But that's not half the story which we would like to tell you. Write for our catalogue No. 166.



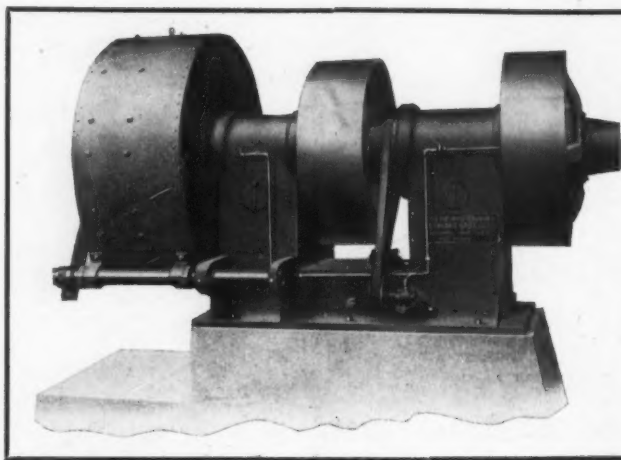
**THE T. L. SMITH CO.**

**1322 MAJESTIC BLDG.  
MILWAUKEE, WIS.**

**OLD COLONY BLDG., CHICAGO, ILL.  
SCHOFIELD BLDG., CLEVELAND, O.**

Tell 'em you saw it in ROCK PRODUCTS

## We Have Over A Hundred Good Active Agents



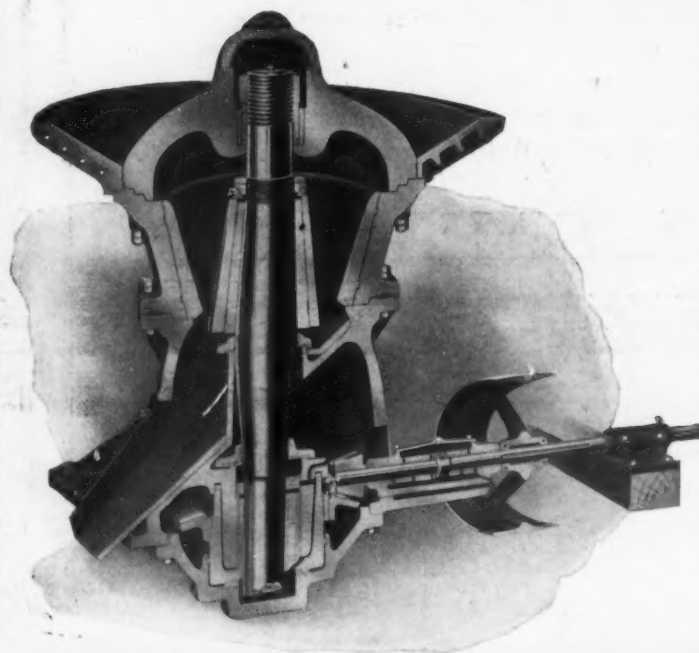
They work from morning 'till night,  
—some of them all night long.  
Their places of business dot the map.  
They tell the same story of success.  
They never get tired.  
They talk through deeds, — not words.  
Their arguments are unanswerable.  
We pay them no salary. They pay us  
A good bunch of workers, these  
**SYMONS DISC CRUSHERS**, controlled by companies that furnish  
small sized crushed stone.

*Our catalogue—you need it—glad to send it. Write us*

**SYMONS BROTHERS, MAJESTIC BUILDING  
MILWAUKEE, WISCONSIN**

## TRAYLOR ENGINEERING & MFG. COMPANY

**ROCK CRUSHING MACHINERY, CEMENT MAKING MACHINERY,  
MINING, MILLING AND SMELTING EQUIPMENT**



**MAIN OFFICE: 30 CHURCH STREET, NEW YORK  
WORKS: ALLENTOWN, PA.**

**Middle West Agents: MARSH CO., Old Colony Bldg., Chicago**

**Jaw Crushers built up to size  
72 in. x 96 in.**

**Crushing Rolls built with Automatic  
Side Adjustment**

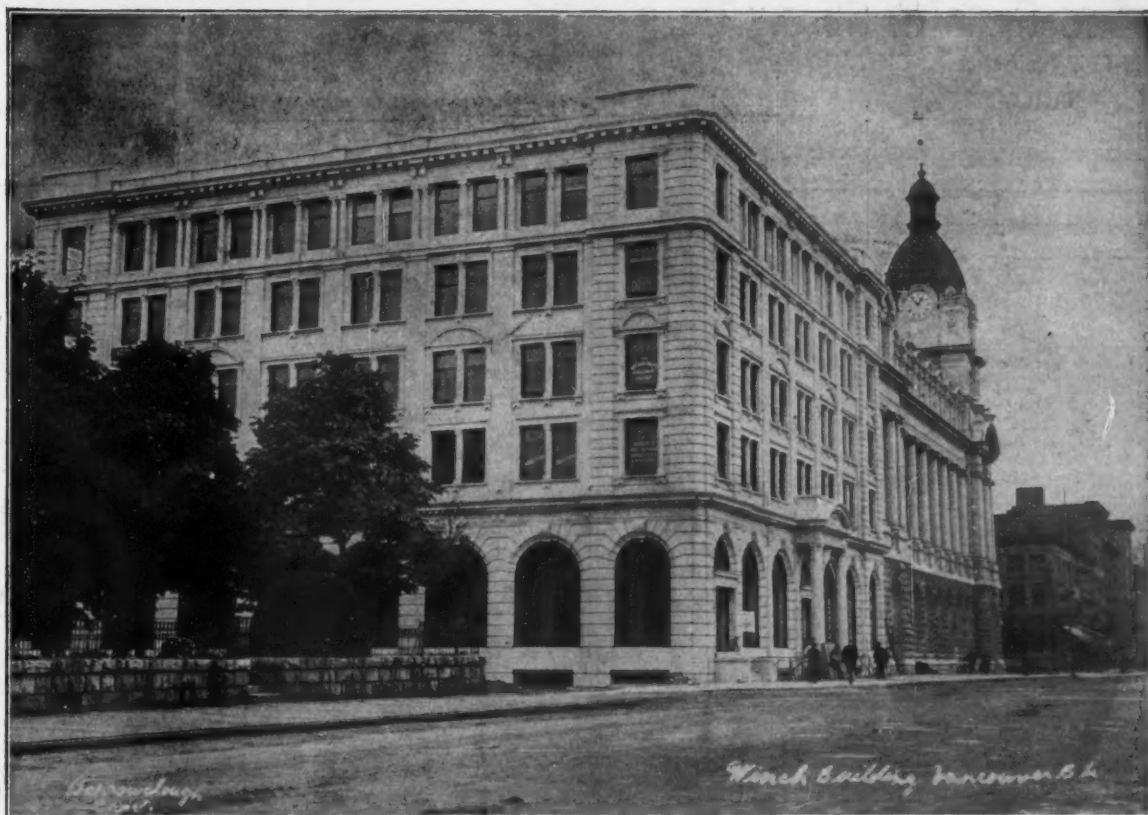
The **TRAYLOR GYRATORY CRUSHER** is the only  
one made that has a running reservoir of oil  
encircling the full height of the eccentric bearing.

**Are You Interested in Our Catalog  
Just Off the Press?**

Tell 'em you saw it in **ROCK PRODUCTS**



# Triangle Mesh Concrete Reinforcement



Winch Building, Vancouver, B. C.

Triangle Mesh reinforcement used.

Made by  
**American Steel & Wire Co.**  
CHICAGO, NEW YORK, DENVER, SAN FRANCISCO.

WRITE FOR ILLUSTRATED PAMPHLET

United States Steel Products Co., 30 Church St., New York., Export Representatives

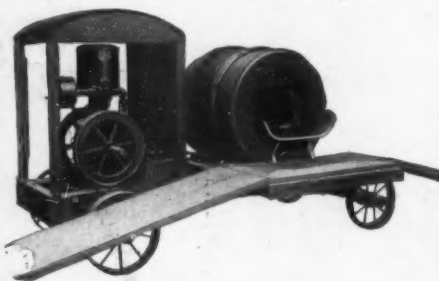
## TO ANY ONE WHO WILL INVESTIGATE

There is a Fact That Compels Conviction That  
The Eclipse Low Charging Concrete Mixer

## SAVES MONEY

Saves in the first cost of the machine, saves in power, saves in fuel, saves in manual labor, saves in attendance of the machine, saves in portability, saves in delays and saves in repairs.

Figure all of this saving and the aggregate saving is so important that the greater economy must be evident to you.



### Immediate Shipment

We carry a stock of about 100 Eclipse Mixers at our factory, branch houses, ware rooms, stores and sales agencies ready for immediate shipment the day your order is received. And don't forget that the Eclipse Mixer is cheapest to buy, cheapest to operate and cheapest when you have figured all the expense when the season's work is through.

Catalog No. 33 describes it. Shall we send the catalog?

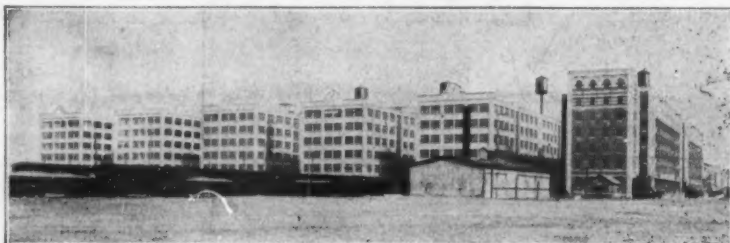
## The Standard Scale & Supply Co.

1345-1347 Wabash Ave., CHICAGO

NEW YORK  
136 W. Broadway

PHILADELPHIA  
35 South Fourth Street

PITTSBURGH  
243-245 Water St.



Bush Terminals, Brooklyn, N. Y., where Sherwin-Williams Concrete Finish was used.

SHERWIN-WILLIAMS

## CONCRETE FINISH

A thoroughly dependable liquid coating for concrete walls and floors both interior and exterior. It is made in 8 attractive colors which dry with a semi-flat finish. S-W Concrete Finish is extremely durable and prevents the absorption of moisture and grease and puts an end to the "dusting" of concrete floors exposed to severe wear. The time and cost for cleaning large areas is reduced more than 50 per cent.

S-W Concrete Finish can be used for the exterior decoration of all concrete buildings and the interior treatment of concrete floors and walls of factories, machine shops, engine rooms, garages, breweries, dairies, power houses, etc.

Write for folder CC 41.

Building Supply Dealers—There is a big field for a high grade finish of this character having the Sherwin-Williams name and reputation behind it. Send for folder and prices.

Address correspondence 708 Canal Rd.  
Cleveland, Ohio

**THE SHERWIN-WILLIAMS Co.**  
PAINT AND VARNISH MAKERS

Factories: CLEVELAND, CHICAGO, NEWARK, MONTREAL, LONDON, ENG.  
SALES OFFICES AND WAREHOUSES IN PRINCIPAL CITIES



Ceresit Waterproofing was used in Lodge Building, 42nd St. and Irving Park Blvd., Chicago.

The water carries the Ceresit uniformly into every portion of the concrete mass and makes it absolutely proof against water penetration even under the greatest water pressure.

## "Ceresit" Waterproofing

Ceresit waterproofing makes the concrete denser and does not reduce its tensile strength. Ceresit may be used with the positive assurance that it will keep water out of all concrete work on tunnels, foundations, dams, reservoirs, swimming pools, cellars, water tanks, water towers, walls, floors and roofs.

Ceresitized cement mortar is an effective permanent water repellent when used as a coating on all kinds of structures built of concrete, brick, stone or tile. It is also successfully used in cement-stucco and exterior cement finishes.

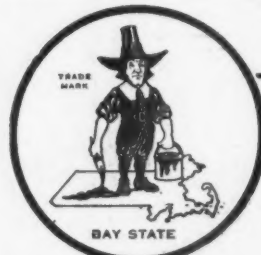
Write for Free Book "J" and try Ceresit on your next job.  
Ceresit is catalogued in "Sweet's" Index.

Agents Wanted in Unoccupied Territory.

**Ceresit Waterproofing Company, 133 South Clark Street, Chicago**  
Branches—1133 Broadway, N. Y. 1218 Chestnut Street, Phila., Pa.

## Water Can Not Penetrate Ceresitized Concrete

Ceresit waterproofing is a cream white paste which is put into the water before mixing the concrete or cement mortar.



CONCRETE or STUCCO CONSTRUCTION  
REQUIRES PROTECTION WITH

The Original

**BAY STATE**

## BRICK and CEMENT COATING

Discoloration and damage from dampness are absolutely prevented by this coating. It has been endorsed by the National Board of Fire Underwriters as a fire retarder and is not affected by acids or smoke.

It can be used as an interior tint or decoration.

**BAY STATE**

## BRICK and FLOOR CEMENT COATING

wears well and can be washed and prevents dusting. Is used with great success in hospitals and other places where sanitary requirements are necessary.

Let us send you a book which tells you all about it. Please mention this medium. Address

**WADSWORTH, HOWLAND & CO., Inc.**  
Paint and Varnish Makers and Lead Corroders  
82-84 Washington St., Boston, Mass.



Tell 'em you saw it in ROCK PRODUCTS



# MCCORMICK

## PROCESS

# WATER PROOFING

Did you read that illustrated article in the August issue of ROCK PRODUCTS?

## Concrete Work in the LaSalle Street Tunnel

More than 40,000 barrels of Marquette Portland Cement in the LaSalle Street Tunnel were Waterproofed by the McCormick Process.

## The LaSalle Street Tunnel Is 40 Feet Below the Surface of the Water

The original plans and specifications for the La Salle Street Tunnel called for an 8-inch waterproofing course consisting of asphalt and brick outside of the main tunnel, and outside of this course an 8-inch wall of 1-3-6 concrete for the purpose of protecting the Waterproofing. In October, 1910, shortly after the construction of the tunnel was begun it was decided to abandon the above method of waterproofing and substitute an integral waterproofing for the entire mass of concrete, **the MCCORMICK PROCESS**, after extensive tests, having been decided upon as being the one best suited for the purpose. The MCCORMICK PROCESS of Waterproofing the La Salle Street Tunnel resulted in a considerable saving of money, labor and time to the Chicago Railways Co., Builders, and the McGovern Co., Contractors.

Any brand of Portland Cement mixed with McCormick Waterproofing Compound at the Cement Mill, or by the Contractor right on the job in one of our specially constructed mixing machines, will make any concrete structure absolutely, uniformly waterproof and alkali-proof.

We loan you one of our mixing machines with quantities of McCormick Waterproofing Compound. The price of McCormick Waterproofing Compound is **Seven** cents per pound, f. o. b. any R. R. Station in the U. S.

WRITE NEAREST OFFICE FOR FACTS.

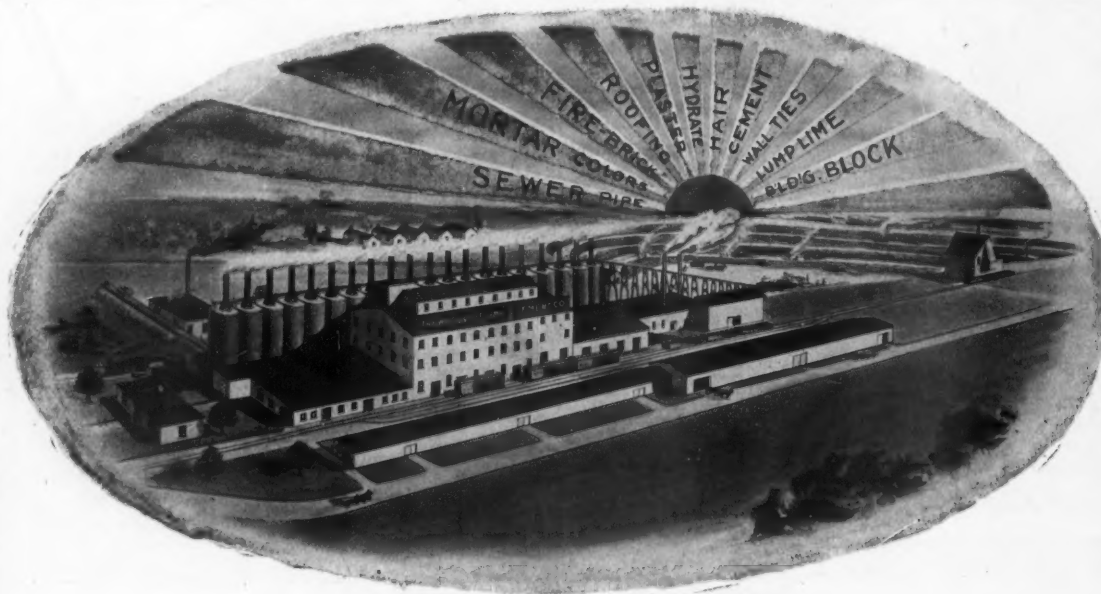
### MCCORMICK WATERPROOF PORTLAND CEMENT COMPANY

Executive Office: Bank of Commerce Bldg., ST. LOUIS

NEW YORK, 92-94 Liberty St.  
DALLAS, Wilson Bldg.

CHICAGO, Chamber of Commerce  
KANSAS CITY, Reserve Bank Bldg.





**"THE BEST UNDER THE SUN"**

## THE WOODVILLE LIME & CEMENT CO.

Manufacturers  
Wholesalers of

**BUILDING MATERIALS**

Mill at Woodville, O.

Offices: 1341-48 Nicholas Bldg., Toledo, O.

**White  
Enamel  
Finish**

**LET US PUT A  
FEW RAYS OF  
SUNSHINE IN  
YOUR BUSINESS**

## REASONS WHY!

It costs less  
delivered.



It needs no  
screening.

*Monarch Hydrated Lime* offers you many good and sufficient reasons why you should now, once and for all, abandon the use of the old, obsolete lump; the lime of other days, those golden (?) days we read about when progress was at a standstill—and cling fervently to the modern way—*Monarch Hydrated Lime*.

### Monarch Hydrated Lime

is better and cheaper than lump lime—you save money and get a better article.

Can be thoroughly soaked in one day in place of seven.

Carries more sand, gauges with one-third less plaster, spreads further and easier than lump lime and it will not airslack.

—And we're specialists in sudden service—you can get your order on the dot.

As manufacturers of MONARCH HYDRATED LIME our location is supreme, our product is superior, our prices are low, you save money and get a better article—and get it quick.

Let us put information in your hands which will prove to you conclusively that *Monarch Hydrated Lime* is the modern method, the progressive one, the profitable one for you. Write us to-day.

**The National Lime & Stone Co.**  
CAREY, OHIO

## MITCHELL LIME

Is Chemically Pure and Practically Free from Waste

The Strongest White  
Lime on the Market.  
Used and recommended  
by Sand-Lime Brick  
Manufacturers, Chemists,  
Soap and Glue Works,  
Plasterers and Masons.

Prices Cheerfully Submitted

**Mitchell Lime Company**

Office:  
521 Peoples Gas Bldg. CHICAGO, ILL.

Works:  
MITCHELL, IND.

Tell 'em you saw it in ROCK PRODUCTS



# The Ohio, and Western Lime Company

**WORKS AT**  
Huntington, Indiana  
Marion, O.  
Gibsonburg, Ohio  
Festoria, Ohio  
Sugar Ridge, Ohio  
Tiffin, Ohio  
Genoa, O.  
Limestone, Ohio  
Lime City, Ohio  
Portage, Ohio  
Luckey, Ohio  
Bedford, Ind.

MANUFACTURERS OF AND WHOLESALE DEALERS IN

Ohio and Indiana White Finishing Lime, Ground  
Lime, Lump Lime, Fertilizer, Hydrate Lime,  
Cement, Plaster, Hair, Etc., Etc.

**Capacity**  
**8000 Barrels**  
**Per Day**

MAIN OFFICE: Huntington, Ind. Branch Offices: Marion, Ohio.

"IF IT IS

# LIME

WE MAKE IT"

Lump - Barreled - Hydrated - Ground  
**STRONGEST IN OHIO**

We are not connected with any Trust or Combination

WRITE US  
PHONE US

The Scioto Lime and Stone Company, Delaware, Ohio

# CROWN HYDRATE

HIGH CALCIUM HYDRATED LIME

At present prices you can waterproof, improve the color and strengthen the texture of all cement construction and actually **save money**, because the Hydrate **replaces** the same amount of cement (15 to 25%).

**Kritzer Vacuum Process**

## MARBLEHEAD LIME COMPANY

KANSAS CITY

CHICAGO

# Banner Hydrate Lime

HIGH MAGNESIA FINISHING LIME

Manufactured by the

## National Mortar & Supply Company

Office at Pittsburg, Pa.

Works at Gibsonburg, Ohio

**Enlarged capacity**

Tell 'em you saw it in ROCK PRODUCTS





### Hydrated Finishing Lime

The Standard by which all  
Other Brands are Measured

A safe, dependable product.  
Dealers who handle it are  
bound to have the best  
plastering trade on their books.  
May we send you a quotation?

THE  
Kelley Island Lime & Transport Co.  
CLEVELAND, OHIO

## Farnam "Cheshire" Lime Co.

OF CHESHIRE, MASS.

MANUFACTURERS OF THE

### Celebrated Cheshire "Finishing" Lime

Well known throughout New York and the Eastern States as the finest finishing lime manufactured. The special feature of this lime is its quick and even slacking, thus preventing any cracking or checking when put on the wall. It is the best lime used in the country today for all

#### HIGH GRADE FINISHING WORK

Selling Department, 39 Cortlandt St., N. Y., C. J. CURTIN, Pres't.

## FOWLER & PAY

Brown Hydraulic Lime, Austin Hydraulic  
Cement, Jasper Wall Plaster, Brick, Stone

CEMENT WORKS: Austin, Minn  
PLASTER MILL: Ft. Dodge, Iowa  
WAREHOUSE: Minnesota Transfer

MANKATO, MINN.

### BRICK AND TILE CLAYS AND MANUFACTURING SITES

Along the Southern Railway and Mobile & Ohio Railroad there are splendid deposits of kaolin; of fire, tile, and brick clays; of cement rock; building sand; building stone; and a number of most desirable sites where local advantages are all sufficient to ensure labor and transportation meeting all requirements. Those looking for best locations where the raw supplies are at hand should write, for detailed information, to

M. V. RICHARDS  
Land and Industrial Agent, Southern Railway  
1370 Pennsylvania Ave., WASHINGTON, D. C.

OR  
CHAS. S. CHASE  
Western Agent  
Room 702, Chemical Bldg., ST. LOUIS, MO.

## BOOKS FOR THE TRADE

### Architects and Engineers

- Building Construction and Superintendence—Masonry Work  
F. E. Kidder Price \$6.00.
- Hydraulic Engineering  
F. E. Turneaure and Adolph Black. Price \$3.00.
- Analysis of Elastic Arches of Steel, Masonry and Reinforced  
Concrete  
Joseph W. Balet. Price \$3.00.
- Theory of Steel-Concrete Arches and Vaulted Structures  
Wm. Cain. Price \$0.50.
- Concrete Country Residences  
Price \$1.00.
- Graphical Handbook for Reinforced Concrete Design  
John Hawkesworth, C. E. Price \$2.50.
- Architects' and Engineers' Handbook of Reinforced Concrete  
Construction  
L. J. Mensch. Price \$2.00.
- Theory and Design of Reinforced Concrete Arches  
Arvid Reuterdaahl. Price \$2.00.
- Treatise on Concrete, Plain and Reinforced  
F. W. Taylor and S. E. Thompson. Price \$5.00.
- Concrete Engineers' and Contractors' Pocketbook  
Wm. F. Tubeling. Price \$1.00.
- Concrete Steel  
W. N. Twelveteens. Price \$1.90.
- General Specifications for Concrete Work as Applied to Building  
Construction  
Wilbur J. Watson. Price \$0.50.
- Strength of Materials  
Edward R. Maurer. Price \$1.00.
- Highway Construction  
Austin T. Byrne and Alfred F. Phillips. Price \$1.00.
- Principles of Reinforced Concrete Construction  
F. E. Turneaure and E. R. Maurer. Price \$3.00.
- Refrigeration  
Chas. Dickerman and Francis H. Boyer. Price \$1.00.
- Heating and Ventilation  
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# Hydrated Lime

## Bulletin No. 41

The Lime Manufacturer who has not installed a Hydrating Plant is losing Money every day.

The Dealer must have a product that he can keep in stock indefinitely without detriment or loss. He cannot afford to lose all the profit on sales made by being compelled to throw away a certain per cent of his stock each month. This is one reason why more Dealers do not handle lime. Why should he, if he makes no profit?

### What the Dealer Wants

is an article that is always good, whether made to-day or ten years ago.

Hydrated Lime meets his every requirement.

Let the Dealer thoroughly understand all the merits of Hydrated Lime and where one Dealer handles this commodity now, you will find one thousand who will carry it in stock; and in addition, each dealer will buy in larger quantities as he can sustain no loss.

Many lime manufacturers have installed a Hydrating Plant, but have adopted the policy of trying to conceal this fact from their competitors, belittle the product to other manufacturers but are on a still hunt all the time for increased business.

### Is this a Wise Policy?

Some manufacturers will be convinced by the arguments used and they and their salesmen will un-



PLANT OF THE TIDEWATER PORTLAND CEMENT CO.

dermine, to a certain extent, the best efforts of this manufacturer who is playing politics in his business.

### Let All Pull Together

show the wonderful possibilities of Hydrated Lime, inaugurate a campaign of information, notify every dealer in the country of all the facts regarding Hydrated Lime, in fact, educate the dealer; make him understand that with this commodity he makes a good profit without a possibility of loss and the lime manufacturer will be astounded at his increase in sales.

### These Are Facts

Hydrated Lime can be made as cheaply as quick lime. The initial cost of installation is not excessive.

The increased sales will soon pay for this cost of installation.

The Lime business itself will be increased many fold.

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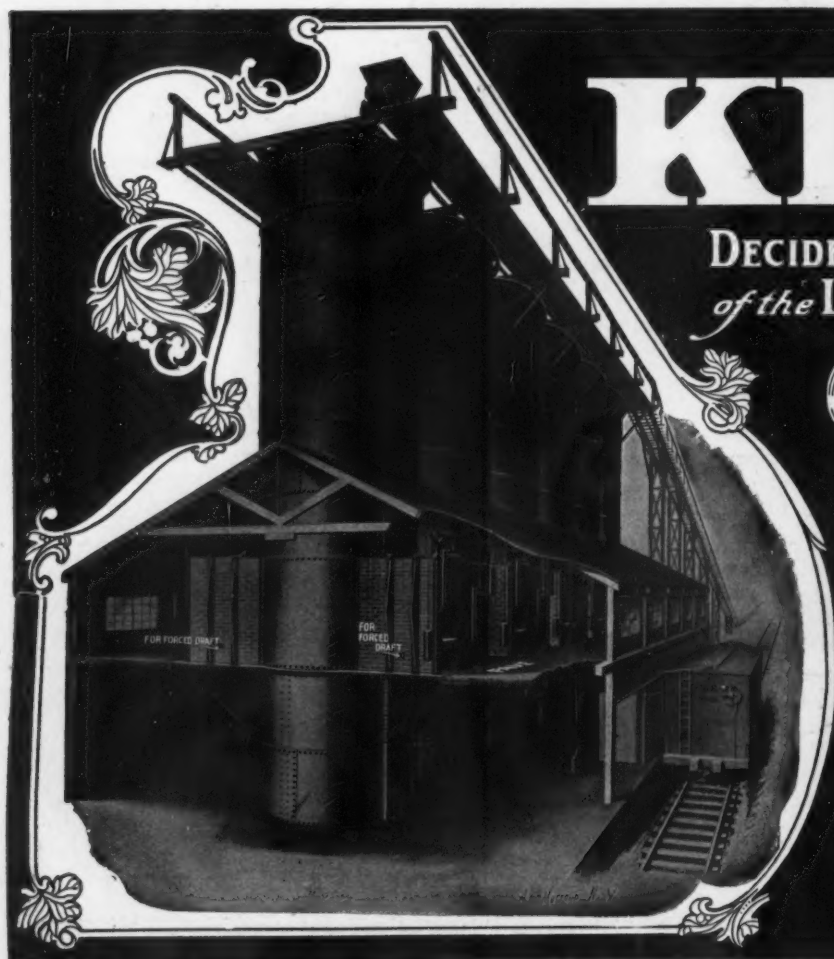
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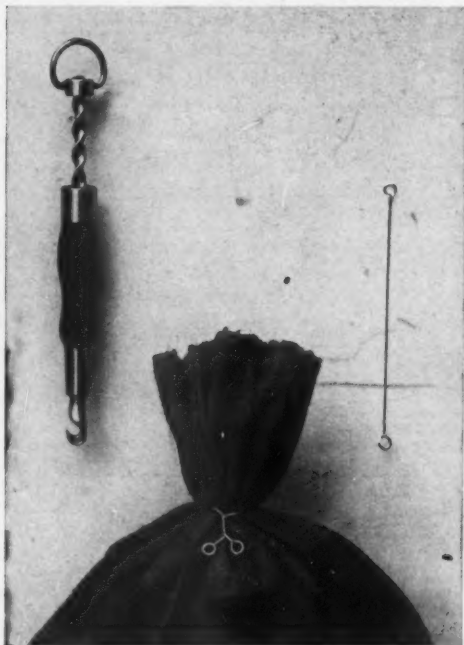
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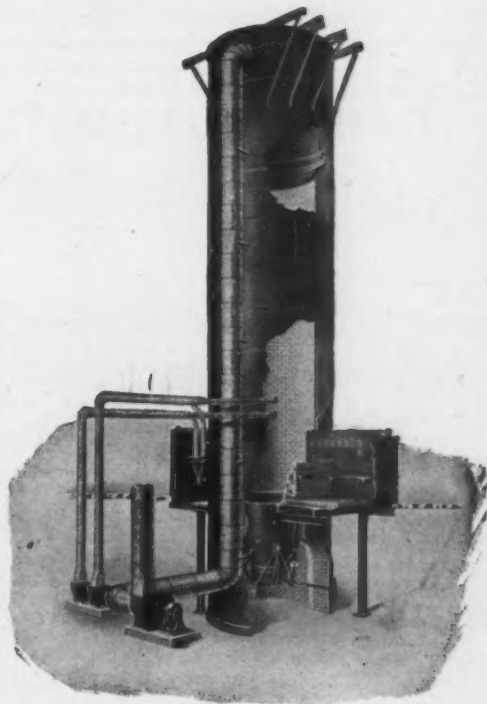


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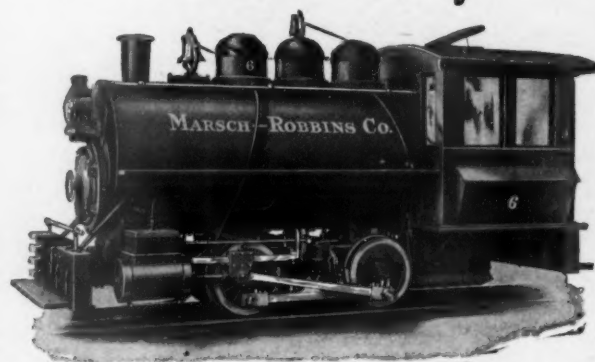
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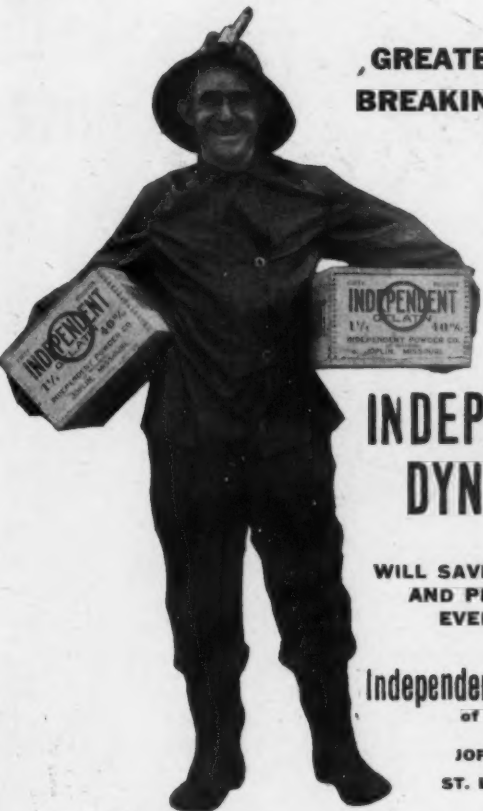
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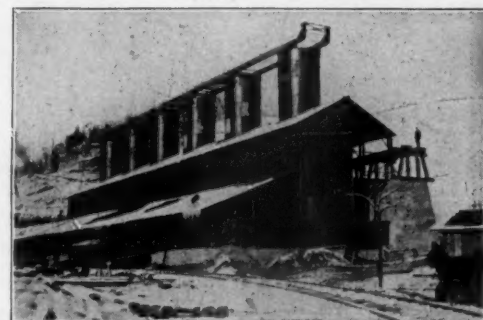
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See Pages  
61 and 62



Lime Kilns and Plant of Blair Limestone Co  
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# ROCK PRODUCTS

ESTABLISHED IN LOUISVILLE, KY., 1902.

DEVOTED TO CONCRETE AND MANUFACTURED BUILDING MATERIALS.

Volume XI.

CHICAGO, SEPTEMBER 22, 1911.

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EDGAR H. DEFEBAGH, PRES.

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### EDITORS:

EDGAR H. DEFEBAGH, MANAGING EDITOR,  
BENJ. F. LIPPOLD.

FRED K. IRVINE.

### ASSOCIATE EDITORS:

CHARLES D. WARNER, F. R. VAN HAMM

### EASTERN DEPARTMENT.

RALPH PEVERLEY, Manager, Room 500, 110 W. 34th St. New York N. Y.

Communications on subjects of interest to any branch of the industry are solicited and will be paid for if available.  
Every reader is invited to make the office of Rock Products his headquarters while in Chicago. Editorial and advertising copy should reach this office at least five days preceding publication date.

### TERMS OF ANNUAL SUBSCRIPTION.

In the United States and Possessions and Mexico, .....\$1.00  
In the Dominion of Canada and all Countries in the Postal Union, ..... 1.50  
Subscriptions are payable in advance, and in default of written orders to the contrary, are continued at our option.  
Advertising rates furnished on application.

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The motor truck is working its way with relentless energy into every trade and industry. Its advent into the distributing end of the great builders' supply industry is welcomed with open arms. It is another step in the onward march of progress.

Organizations for the purpose of stifling competition are worse than none at all. Meet competition with a smile—talk it over—get together. Instead of fighting against one another, fight for one another. This is the kind of co-operation which succeeds.

Honestly made concrete blocks have come to stay. They are making their own market in every city, town and hamlet. Their introduction has not been accomplished without loss on the part of the pioneers but it was ever so with every new invention. The road to success is frequently strewn with failures.

A salesman who can not sell his wares without knocking those of his competitors is not a salesman at all. Talk the advantages of your own products, tell all their good points, and omit the knocks and see if you will not succeed much better. Honest competition is desirable, but dishonest methods frequently act as a boomerang.

The Cement Products Exhibition Co. has sent out broadcast the floor plans, rates, rules and regulations and other information about the three great cement shows to be held in New York, Chicago and Kansas City. These shows are the open markets and every man who has something worth selling should send in his application for space at once. Select your show or shows and begin making your preparations now.

ROCK PRODUCTS will, with its characteristic enterprise, print a daily paper at each of the three Cement Shows duly chronicling the day's happenings and mirroring them for the trade. They have become an essential part of the shows and besides being circulated each day at the show are sent to every person interested throughout the length and breadth of the land.

Have you a good hotel in your town? A good hotel is the best advertisement any city can possibly have. A city is frequently judged or misjudged by its hotel.

Don't wait for luck to come your way. What frequently seems like luck is a combination of circumstances brought about by hard work, enthusiasm, attention to detail and constant and unceasing effort. One success brings another. Never brood over failures. Remember it takes failures to make successes. Keep everlastingly at it. Nothing worth while was ever accomplished without effort. Don't wait for success to come to you, go out and hunt for it. It is the man who is up and doing who succeeds in any and every walk of life.

Any business can be advertised. A local retailer takes a space in his home paper merely to help support the paper because he thinks a good, live paper is a good thing for the town. But he can make that advertisement pay with a little ingenuity and effort. Study the art of advertising. Change your advertisement frequently. Put some vim and energy into your sayings and back up each and every one of them. Tell the truth in your ads, don't get the reputation in the community of not being a man of your word. Such advertisements do more harm than good.

Remember no great business or enterprise was ever built up by dishonest methods or practices. It is no more honest to take advantage of a competitor than it is to take advantage of a customer. No great structure was ever reared on a rotten foundation. Where one man succeeds by trickery and cunning hundreds fail. If you would rear an enduring structure you must begin with the foundation and build honestly. The bread of honest toil is sweeter and more wholesome than the feast purchased as the price of dishonesty and broken faith. Make your word as good as your bond. Do not be honest because you have to, but because you want to. Honesty can become a habit like anything else. Get the habit.

The evolution of the sand and gravel industry has been slow but sure. The demand for a better product has resulted in the introduction of machinery and devices for the better handling of the product. But a few years ago sand was merely taken from the nearest pit or bed of a stream and hauled to the job, but the time has come when clean, washed and graded materials now control the markets and the business has now assumed proportions little dreamed of a few decades ago. Even with all the progress that has been made, the industry may truly be said to be only in its infancy, to use a trite expression, for with the introduction of modern methods comes an ever increasing demand for better material and that demand will have to be met.

The whole country is interested in concrete construction. Everywhere and on every hand we hear of concrete being employed in some manner that would have been marveled at a few years ago. What has become common practice today would have seemed almost impossible a few years ago. And still the new uses of this wonderful building material come every day. There is no need to antagonize any other kind of material. There is room for all in the great march of progress, let each fall into its place in the procession. There is no need for friction, in fact, it were much better for all that the different building materials should work in harmony each with the other, each carrying its share of the burden, and each working for and with the other for the ultimate good of all. It is not the province of a trade paper to belittle other materials in order to prove the advantages of those which it advocates. Success bought at the expense of some one's failures are dear at any price. Let us all work together for the common good.



## EDITORIAL CHAT

### SPECIAL FEATURES IN THIS ISSUE

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### LUNCH TOGETHER, BUT OBEY SHERMAN LAW.

The weakness of the rock products industry is the great amount of selfishness and distrust evident among those who have the destinies of the various companies in their hands. This condition of affairs has resulted in almost every branch of the business losing money, when, as a matter of fact, they should be making money. They have put thousands of dollars into the pockets of the consumer, and while there is no doubt but what the consumer needs the money, it is also very true that the men who have invested millions in manufacturing plants are entitled to some interest on their money.

Other lines of business have been practically in the same condition until they woke up.

We know of some manufacturers who regularly have luncheon together and discuss the various conditions as they find them in their own individual cases about twice a month. They keep in close touch with what their sales force is doing, and by having these semi-monthly meetings they are able to know the exact situation. While there is absolutely no combination among these manufacturers, yet since these meetings have become a fixed institution these twenty or more firms have noted a net increase of not less than 15 per cent. in their prices. It is certain that this condition would never have occurred had it not been for these luncheons. "A word to the wise is sufficient."

### CUT OUT PORTLAND.

Daily newspapers are very careful not to mention in their columns any firm that does not advertise, or mention any product that is not exploited in their pages.

Harry Beach, formerly general superintendent of the central division of the Associated Press, is authority for this story:

"I happened to be in the local room of one of the Chicago dailies one night," he said, "when one of the copy readers handed over to the head desk man a story he had just edited and written a head for. It was a commercial story about some building in which cement was mentioned.

"Here," said the desk man to the copy reader, handing him back the story, 'we don't want to advertise anybody's cement—cut out that word 'Portland.'"

"And the copy reader cut it out."

Charles McCormick, president and general manager of the McCormick Waterproof Portland Cement Company of St. Louis, Mo., was a Chicago visitor last week. He was on a business trip and was well pleased with prospects for the trade.

### SAMUEL VERNON PEPPEL DIES.

Samuel Vernon Peppel, for years a member of the technical staff of Rock Products, died at the home of his mother in Leetonia, Ohio, Monday, August 21, at the age of 41 years. Mr. Peppel and his wife went to Leetonia August 17. He had been in poor health for over a year and had gone to his old home to rest and recuperate. Four days after his arrival he died. Interstitial nephritis was the immediate cause of death.

Samuel Vernon Peppel was born in Washingtonville, Ohio, September 30, 1870. When a boy he went with his parents to Leetonia, and had ever since that first visit held the highest esteem and confidence of the community. As a boy and a young man he was a close student and hard worker. It was this close application to every duty that undermined his health. He never forsook business for pleasure until the former was completed. He always did his work conscientiously and well, and only the highest words of praise are spoken in his memory.

He graduated from the Leetonia High School with the class of 1890. In 1900 he graduated from the Ohio State University with the degree of Bachelor of Science, and later became instructor in the laboratory of the University of Wisconsin, at Madison, where he analyzed and classified the clays of the state of Wisconsin.

On completing his actual schooling he became assistant state geologist under Professor Orton at Columbus, and for several years was active in field work throughout Ohio. In this connection he prepared several bulletins relating to lime and cement developments and possibilities in Ohio.

His worth was recognized by all experts in his chosen profession. He was an honored member of the following scientific bodies: The International Geological Society of the World, the American Ceramic Society, the American Chemical Society and the American Society for Testing Materials.

He enjoyed a wide acquaintance with the readers of this journal and was generally a favorite at the conventions and in the field work, for he covered the eastern half of the United States pretty thoroughly during his connection with it.

Besides the widow he is survived by his mother, Mrs. C. F. Peppel, and a sister, Mrs. Martin, of Cleveland.

Funeral services were held from his mother's home, conducted by the Rev. Brilhart. Interment was under the auspices of the local Masonic lodge of Leetonia, for he was a Mason of the 32d degree and a Shriner. The large and sympathetic attendance at the funeral portrayed the high regard in which Mr. Peppel was held by his old-time friends and associates.

### APPALACHIAN EXPOSITION.

It is understood that a large cement plant is to be established at Knoxville, Tenn., with \$1,500,000 capital. It will occupy a site in the city where there is fifty acres of dolomite several hundred feet deep, and about 150 feet above water level, located on the Tennessee river, and all railroads that enter the city pass through the property. Other material needed in the cement making can be obtained within a very short distance of the site. Six classes of material that the proposed cement plant will use will be exhibited at the Appalachian Exposition, at Knoxville, Tenn., Sept. 11 to 30, 1911.

Marble spawls that are found at the numerous quarries contain about 99 per cent carbonate of lime. There are also many shales and slates that are used in cement that are found in large deposits near Knoxville, and in fact all over the Appalachian region, furnishing excellent cement material. These will all be exhibited at the exposition.

Early to bed and early to rise, work like h— and organize.

Thomas Emmet Crimmins, the contractor and brother of John D. Crimmins, the largest individual employer of labor in the country, died on September 8th at his New York residence, 725 Park Avenue, after an illness of one month.

The Pittsburgh Testing Laboratory begs to announce to their clients and to the interested public that they have appointed, on August 28, their R. T. Miller acting manager of their Chicago office, 1330 Monadnock Building, vice James A. Lister, whose connection with that company was severed on August 26.

Patrick Goodman, who years ago developed the famous sand properties at Port Washington, Long Island, died at his residence, 344 East Fifty-eighth Street, New York City, on August 7th. Mr. Goodman left an estate valued at more than \$3,000,000, the foundation of which was made in the sand and gravel business.

### History Makers of the Building Material Industry

Among the men who are making building material history today there is none more prominent than John K. Morron, the president of the Atlas Portland Cement Co. Mr. Morron in the short length of time that he has been at the head of this gigantic cement company has made his impress on the industry. When Mr. Morron was elected president of the Atlas company, his advent into the cement business was looked upon with some misgivings by the trade in general, because it was thought that a man in order to head a big institution of this character, ought at least to have had some previous experience with a business of a similar character. It was not long, however, before Mr. Morron made his presence felt in the trade and his strong personality and keen insight into business conditions was soon noted in the operations of the company and the industry as a whole.

While perhaps Mr. Morron could not have stepped into the cement industry at a more trying period, he has already demonstrated by his wonderful tact and his mastery of details that there is no problem too big for him to handle or no situation in the industry that he cannot cope with successfully.

Mr. Morron was not unknown in the business world, as he had already made his mark as the president of the Peter Cooper Glue factory, one of the largest manufacturers of glue in the United States. His wonderful ability had already attracted the attention of the great financial interests. He still remains director of one of the largest financial institutions in Chicago, which makes it possible for many of his friends to still claim him as a Chicagoan.

### WHAT DEALERS SAY OF "ROCK PRODUCTS."

J. E. Bartlett, of the Bartlett Supply Company, manufacturers and distributors of high grade building material, Detroit, Mich., writes: "I am very much pleased with the nice write-up you gave our company in the last (August) issue of Rock Products. We appreciate the nice advertising given us and would also say that the little ad we ran in ROCK PRODUCTS to sell a brick press brought us very quick results and at least ten opportunities of selling the press."

Barton J. Mitchell, president of William S. Humbert, Inc., Niagara Falls, N. Y., said: "I look anxiously for your paper every month—it contains so much news concerning concrete construction and matters of interest to the builders' supply dealer which is of great benefit in my business."

"You have the latest, newest and best paper published in the concrete field by far," said S. M. Hamilton, president of the Buffalo Builders' Supply Company, Buffalo, N. Y.

F. S. Lane, secretary and treasurer of the Paragon Wall Plaster Company, of Buffalo, N. Y., said: "Yours is the paper we look to and the only one we consider worth reading of all the concrete papers published."

"We are more than pleased with the results your paper has produced and with the news you give us in every issue," said M. A. Reeb, of Buffalo, N. Y.

### WARM APPRECIATION.

The following letter, which we have just received from J. Frank Norris, manufacturer of Norristone, Rochester, N. Y., explains itself:

"I appreciate your ROCK PRODUCTS more every month I get it. It is full of bright news, contains a great deal of information concerning concrete construction which is of benefit and of which I make use of in my business constantly. Wishing your publication the success it deserves, I am,

Yours very truly,  
(Signed) "J. FRANK NORRIS."

### ARE THERE ANY MORE?

Did you ever hear of a dealer like the old grocer in the country town they tell about? This grocer was asleep in his chair one day and the flies were playing tag around his ears. A little girl carrying a jug tiptoed into the store and going up to the old grocer nudged him in the side.

"Mamma wants some molasses," she said.

The storekeeper roused up, rubbed his eyes and said petulantly:

"Ain't there anybody in this town sells molasses but me?"



**FIRE WASTE FOR 1911 EXCESSIVE.**

Present indications are that the fire losses in the United States and Canada for 1911 will exceed \$260,000,000. The figures for the first six months of the year show a total of \$129,691,750, as compared with \$99,228,900 during the same period last year. The losses for 1910 were \$234,406,650, and if the present ratio of increase continues throughout the year, the 1911 losses may approach \$300,000,000. This will exceed any year in the history of the country except those of the San Francisco and Baltimore conflagrations.

Government officials, underwriters and firemen agree that the majority of these fires are due to carelessness and are easily preventable. All of the recent fires, which have attracted public attention because of the heavy loss of life with which they were accompanied, were due to the carelessness and indifference of the owners, occupants, or municipal authorities. The country cannot go on indefinitely burning up hundreds of millions each year, merely for lack of proper individual and municipal responsibility. New York has been spending \$10,000,000 a year for fire extinguishment and only \$10,000 for fire prevention. The recent shirt waist factory fire aroused the public and the authorities, and fire prevention is to be made much more prominent hereafter. The most important consideration is the development of a sense of personal responsibility on the part of property owners for the excessive fire waste, which is draining the resources of the country and weakening its insurance capital. A score of fire insurance companies have retired from the field already this year because of the heavy losses last year and the unfavorable outlook, two of the number being companies over a hundred years old.

George S. Roth, senior member of George S. Roth & Sons, contractors and builders, died on August 17. He was 78 years old.

James Christie, of Philadelphia, Pa., president of the Engineers' Club and vice-president of the Franklin Institute, died at Atlantic City August 24, at the age of 71 years.

Walter L. Patterson, a well known contractor and builder of Collingswood, N. J., died on August 22, following an operation for tumor of the kidney. He was 50 years old.

We are in receipt of a letter from the Fort Pitt Engineering Company, well-known consulting and contracting engineers of Pittsburgh, Pa., in which they say: "Rock Products is regularly received at this office, and we consider it the best paper of its kind."

W. O. Badgley, manager of the Pacific Lime & Plaster Company, of San Francisco, Cal., is making a trip through the East, getting in touch with the large lime manufacturers in the eastern territory. Mr. Badgley spent some little time in Chicago, and was a caller at Rock Products' sanctum.

R. M. Thaker, of Rich, Okla., who is foreman for the M., K. & T. crushing plant and quarries, said in a recent letter, in which he asked to have his paper changed from his former address at McAlester to Rich: "I do not want to miss a number. I enjoy the news in Rock Products as well as I do in my home paper."

W. P. Hurst, prominent supply man in Cleveland, Ohio, was a Chicago visitor last week. Mr. Hurst is one of those energetic young men who always get recognition, and incidentally a good round share of the business that is going. He says there is always something stirring, only sometimes he has to go after it harder than others.

**BUILDING RECORD BROKEN.**

Building Inspector Marani, of Cleveland, Ohio, recently stated that the new building totals there for 1911 would break all previous records, including that of 1907, when the new courthouse permit was issued.

**A CORRECTION.**

On page 22 of the August issue of ROCK PRODUCTS there appeared an article written by Hilder Daw, of the Hilder Daw Concrete Formes Company, No. 11 Broadway, New York City, N. Y. The article made it appear that the same was written by Mr. Shaw. This was a typographical error, and we cheerfully make the correction.

# OUR WASHINGTON LETTER

News, Notes and Comment from the Capital

WM. B. BARR, WM. WOLFF SMITH, E. H. PULLMAN  
Contributing Editors  
722-723 Southern Building, Washington, D. C.

**OUR WASHINGTON BUREAU.**

The National Government is in such close contact with every line of business that a reliable source of information located at the Capital is everywhere regarded as invaluable. ROCK PRODUCTS maintains at Washington a fully equipped and highly efficient news and information bureau located in the heart of the business and financial district and convenient to the government departments. Our patrons who may wish to be privately informed will find our Washington Bureau prepared to serve them promptly and efficiently by mail or wire. Charges are consistent with the character of the service.

The field covered includes: Congress, the U. S. Supreme Court, Court of Commerce and other courts; the Interstate Commerce Commission and other commissions, and all Government Departments with their various bureaus and branches.

Our patrons are invited to make our bureau their headquarters while in Washington and avail themselves of our facilities.

Inquiries may be addressed to ROCK PRODUCTS, or to its Washington Bureau, Rooms 722-723 Southern Building, Washington, D. C.

The information that there are good possibilities that the government and the great industrial operations will get together on plans under which they can be reorganized or reconstructed to bring them within the scope of the Sherman act, as interpreted by the United States Supreme Court, without prolonged litigation, is calculated to have a most beneficial effect on business. A favorite reason assigned for the organization of a corporation sufficiently large to bring it within the "trust" category is a desire to insure stability of conditions. It has been frequently maintained by their representatives, both before the courts and the congressional committees, that the officers of these corporations and the stockholders, large and small, have been actuated by a desire to conduct their business within the law, a proposition that appears entirely reasonable, in view of the drastic provisions of the Sherman act and the fines and imprisonment penalties therein provided for those convicted of violating it.

The Department of Justice has taken the ground that while the Standard Oil and Tobacco Trust cases were pending, and before an interpretation of the law by the Supreme Court was had it was inadvisable to press for imprisonment sentences, but now that the way has been clearly marked out, it is to be presumed that those who continue to violate the law do so intentionally and at their peril. In addition to the possibility that some of the responsible parties may eventually land in jail there is an important financial factor that has been overlooked until recently. The Sherman act provides that parties who have been injured by a trust in the conduct of its affairs may, if they can prove its illegal existence and acts, recover triple damages. In the case of the Tobacco Trust, a verdict was recently obtained against it in a North Carolina court of \$60,000, to which the judge added the costs of approximately \$100,000 and a \$10,000 counsel fee for the complainant's attorneys. Encouraged by the outcome of this suit others have been filed in amounts ranging from \$50,000 to \$500,000 and if the damages are finally collected there will doubtless be many of a similar character.

It therefore appears that when a combination resists prosecution and the government wins, it not only faces dissolution under circumstances less favorable than if agreed to without litigation, but its promoters are likely to be confronted with jail sentences and the corporation with the possibility of losing immense sums in damage suits.

Voluntary surrender is calculated to relieve magnates from danger of criminal prosecution and jail sentences. Attorney General Wickersham will not, for the present, guarantee such immunity for obvious reasons, but there is every reason to believe that he will meet the trust heads in a fair and conciliatory spirit and refrain from such prosecutions when they show a genuine desire to avoid litigation and to comply with the recent interpretation of the law. In this connection it is well to bear in mind that President Taft has recently indicated that at least some of these corporations were organized under decisions of the Supreme Court, such as that in the Knight case, and it would be difficult to send the organizers to jail because the Supreme Court had, to a certain extent at least, reversed itself.

ROCK PRODUCTS is given to understand that the government does not anticipate making any agreement with any combination under investigation that will savor of favoritism. The process, as outlined to your correspondent, will be for the government to institute its suit and the defendants make their reply. The issues will then be submitted to the court and a decree drawn by it, under agreement of counsel. It is not expected that counsel for the government and the trusts will agree upon all particulars, but each will submit its views to the court which will finally frame the decree. Thus the proceedings will all be in open court and devoid of secrecy, while the government will maintain a tight rein over the reorganization of the corporation by reason of the latter's liability to contempt proceedings should it not strictly conform to the decree.

The working out of the plan of peaceful dissolution and reorganization of the combinations seem to be resting largely in the hands of Attorney General Wickersham, on the one side, and George W. Perkins on the other. Mr. Perkins is chairman of the finance committee of the Harvester Trust, a powerful factor in the Steel Trust, and connected with many financial and industrial institutions directly or indirectly, not the least of which is the firm of J. P. Morgan & Co., from which he recently retired as a partner. He has announced his determination to devote himself to the interests of the industrial peace, including the reconciliation of conflicting interests of labor and capital, and now it appears he is working to harmonize the government and the trusts. Mr. Perkins is known to be in sympathy with a fair amount of government supervision which augurs well for the favorable outcome of the pending negotiations between Attorney General Wickersham and the Harvester and Steel combinations.

Senator Clapp's Committee on Interstate Commerce will begin its sessions on October 15, and Mr. Perkins will be one of the most important witnesses before it on the subject of the further regulation of industries. Anything that is likely to lead to the restoration of stable conditions and the lifting of the cloud of apprehension may be expected to receive the approbation of the business world.

**Good Roads and Hauling by Motor Trucks.**

A member of our Washington staff not long since had a talk of an interesting nature with B. F. Yoakum, chairman of the executive board of the St. Louis & San Francisco Railway.

Mr. Yoakum is a great believer in cooperation as between shippers and carriers. He is now and has been for some time a most influential factor in directing national attention to the making of good roads and is liberal in his efforts to show the economic value of such improvements.

We believe no careful thinker can refuse endorsement of his creed nor fail to see its money value to every interest making use of either city streets or country roads.

As a matter of pleasure to those who wish to travel over the country in their own conveyances, it means that they will be attracted to and may become financially interested in the growth of the sections most favorably seen.

In a commercial sense the saving in the cost of transporting farm and other products to market is so great in comparison with the actual cost that hesitation about the matter of expense seems lack of public spirit.

We have no estimates immediately before us, though the cost per acre for good permanent roads in the country is very low. In this connection we note the general tendency to make use of motor trucks not alone in the city but in the country for heavy loads and for long distances. The economy of well constructed motor trucks (and well built ones are the only economical ones to operate, and therefore the cheapest) is now well proven in the cities.

For hauling all heavy commodities like brick, ice, coal, stone, sand, gravel and lumber; for moving vans, transfer wagons and for large and bulky stuff like cooperage supplies they have become a necessity in all large business centers.

Good roads in the country will hurry the time when much of the farmer's teaming can be done with these trucks and when not in use for teaming the motor can be used for running other machinery about the barns and storehouses.

We have in mind a recent trip made by a motor truck manufactured by Longest Bros. Co., of Louisville, Ky. It carried a 10-ton load of brick some

eighteen miles into the country without any trouble and made the trip in one-fourth of the time required by team, notwithstanding it was country hauling.

The same firm has been handling ice in 5-ton trucks and at times performing the work of eight teams with one truck.

The good roads propaganda and its accompanying result, the motor truck, will really go farther than the suburban trolley and almost equal the value of the telephone.

The traction growth is a public benefit it is true, and of great value, but the good roads and motor truck service is more for individual use and control, and hence of more personal interest.

We are in the beginning of an era of great progress in the line mentioned and it means a transformation of methods and greater comfort in living. The investments, too, are small when contrasted to the benefits.

C. W. Tallcott, secretary and treasurer of the Ernst Wiener Company, manufacturers of industrial and contractors railway equipment, returned two weeks ago on the steamship Rotterdam from Europe, after a six weeks' trip.

#### REDMAN SYSTEM OF HOLLOW-WALL CONCRETE CONSTRUCTION.

Washington, Sept. 16.—W. T. Redman has built himself a house in a Washington suburb to demonstrate the practicability of the new style of concrete construction he has devised. He has been working on the problem involved for more than five years. Finally he succeeded in making a collapsible core for concrete wall construction, and secured a patent on it.

Mr. Redman's invention involves the use of a wedge-shaped mold made of two boards covered with galvanized iron, held apart by blocks at the ends. Each mold is one foot in height. The mold is wider at the bottom than at the top, the wedge thus made forming a ledge on which the next mold board may be placed. The end blocks slope inward to the bottom of the mold and then outward again, forming a supporting toe for the concrete bond between the inner and outer walls. As each section of wall is completed a supporting bolt is removed and the end wedges of the mold are driven down into the wall until caught by the next alternating bond, when the whole mold may be removed.

When two or more of the molds are placed end to end and concrete is poured around them the result is the formation of the diamond shaped bond which becomes an integral part of the inner and outer walls and holds the two together; and when section after section of wall is built the result secured is said to be a building of the monolithic type, the hardening of the concrete making a structure as solid as though it had been hollowed out of solid rock. Mr. Redman believes that he has demonstrated all of his claims in the house he has built for himself. He made the walls ten inches thick, or three inches of concrete in the inner walls and three inches in the outer, with four inches of air space between. Partitions between the rooms were built in the same manner. But where there were doorways, the bonds were knocked back a sufficient distance to allow sliding doors to run back into the walls. Although in actual practice the collapsible cores are used in three foot lengths, the cores may be in any length, except that they cannot be so long that the concrete binders connecting the inner and outer walls cannot be too far apart if solidity and strength are to be secured. To provide for windows and other openings, the cores are made in even shorter sections so that the walls may be broken where necessary. In Mr. Redman's own house the walls were poured at the rate of one foot a day. In each alternate layer of concrete the forms were so placed that the bonding joints were in a row. The bonds were "staggered," in the language of the trade. The proportions used in mixing were one part of cement, two parts of sand and four parts of gravel. A claim made by the inventor is that this plan involves no more expense than solid walls, and that houses so constructed are "time-proof and heat-proof," as well as moisture-proof, water-proof and proof against vermin. Convenience in installing plumbing fixtures is also claimed. Another novel feature claimed for the Redman house was the construction of a flue by simply placing the concrete binders end to end in the perpendicular walls, so that the chimney on top was the only part of the flue it was necessary to build apart from the actual wall of the house.

## HOTELS

### Good Ones Are an Essential in the Proper Upbuilding of a City and Are a City's Best Advertisement.

A city is frequently judged by its hotels. Good hotels are the best advertisement that a city can have, likewise poor hotels are the worst advertisement. Many cities owe their development to first class hotels and many instances could be cited to prove this assertion. In Canada the three great rival railway systems, the Canadian Pacific, the Grand Trunk and the Canadian Northern, operate strings of hotels across the continent and have done more to attract tourists and advertise the country than any other method that could have been devised. The building of these hotels was forced upon the railroads, as private capital could not be induced in many instances to take the risk or chance of making them pay. Probably some of them do not pay today, but others more than offset the loss, as there are many of them which are known to be proverbial gold mines because they are always crowded. They are all first class hotels, as the railroads figured that it would not pay to run a second class hotel, as it would prove a poor advertisement. One can travel all over Canada and stop only at the big railroad hotels and be assured of accommodations such as they might expect to find only in metropolitan centers. Not only have they built large hotels in the cities, but they have also built them at the great resorts or at points interesting to the tourist, which because of the hotel have become famous resorts and which attract thousands of tourists who would not go there if it were not for the hotels.

The railroads are not in the hotel business for their health albeit they are taking some chance, but their hotels are manned by experts in the hotel business who have resolved the management of their caravansaries down to an exact science. These railroad hotels are among the best managed in the Canadian provinces and are models of their kind.

Among the hotels owned and operated by the Canadian Pacific may be mentioned such splendid hotel properties as the Chateau Frontenac at Quebec, the Place Viger at Montreal, the Royal Alexander at Winnipeg, the Hotel Vancouver and the Empress at Vancouver Island, the Banff at Banff in the Canadian Rockies, and the Ship Inn at Halifax. The same company plans to build another at Calgary.

The Grand Trunk will shortly complete a magnificent hotel at Winnipeg, called the Selkirk, and will also build a hotel along similar lines at Prince Rupert, the Pacific terminal. The same road also plans to build a half dozen fine summer hotels in the Connecticut Valley on the line of the Central Vermont railway, which is operated by the Grand Trunk.

The Grand Trunk railway recently completed the magnificent Hotel Laurier at Ottawa, said to rival if not surpass the Chateau Frontenac.

The Canadian Northern has only recently started into the proposition, their first hotel being the Prince Arthur Hotel at Port Arthur. A duplicate of this hotel is being built at Brandon, Manitoba, and when the Canadian Northern finishes its extension to the Pacific coast it will build another at Port Mann, in honor of Sir Donald Mann, the vice president of the company.

In fact all the first class hotels in the Dominion of Canada are owned and operated by railroads, with the exception of the Windsor at Montreal and the King Edward at Toronto.

Suppose the railroads in this country did the same thing, what a grand lot of hotels we would have. But the people in this country would not accept them in the same spirit as in Canada, so it is obviously out of the question. To use a slang expression the railroads are "in bad" in this country and are not any too popular with the people.

Why can't the retailer of builders' supplies take up the matter with his commercial club or board of trade? In some cities public spirited men, genuine philanthropists, erect magnificent hotels partly as monuments to their memory and partly to advertise the city. If they are men who have large property interests in the city, it pays by enhancing the value of their property. There is no doubt that a first class hotel increases the value of all the adjacent property and in fact enhances the value of every foot of ground in the entire city.

A first class hotel brings thousands of dollars into a city that would not be spent there otherwise. Every traveling man knows the towns with the good hotels and manages to spend as long a time as possible there and usually arranges his schedule

so that he can stay over night, even if it is only a small town. He always dodges whenever possible the town with the "bum" hotel. If some of the rich tightwads and merchants could hear the remarks made about their town because of the rotten hotel they would soon wake up. Not long ago the writer was on an electric car going to a small Ohio town with which he was not thoroughly familiar, and innocently asked some traveling men in the car which was the best hotel in the town. Their answer was, "There is no best, they're both rotten, don't stop at either of them. When you get through business take the trolley and go to——". They've got a dandy hotel over there." The writer had occasion to go to one of the hotels anyhow and the traveling men's criticisms were borne out. It is impossible to estimate how much money, to say nothing of actual business, this condition is costing the city. Many a traveling man has cut a town off of his list on account of a "bum" hotel. Now this may sound strange to a great many men, but to anyone who has traveled extensively it is a very apparent fact. A first class hotel makes a great difference in a town because even the local merchants and the public can not fail to feel a pride in the fact that they have a better hotel than some neighboring village.

Every traveling man becomes a booster instead of a knocker. How humiliating it must be to a merchant to have to admit to a salesman that the hotel is "punk," and lots of them have to admit it or put themselves in the "not wise" class.

A good argument that the local retailer of builders' supplies can use is the fact that there is no better time to build than at the present for the reason that materials of all kinds are as cheap today as they have been for some time past or will be for some time to come.

It would pay cities much better to subsidize a hotel, if need be, than to give plots of ground and free taxes to new factories.

Why not give some enterprising hotel man a free site for a hotel and exempt it from taxation for five years?

It is an experiment well worth a trial and we believe that if the subject were investigated that what we have said about poor hotels actually retarding the progress of a town would be found to be a grim reality and not an idle fancy, as many might imagine.

#### IN TOUCH WITH THE WORK.

Nobody does more to advertise the concrete industry than the maker of good sidewalks, for the people are constantly brought into touch with his work. H. L. Blackmer, of Minonk, is one of the leading contractors of Illinois. In his work he uses mostly Owl and Medusa cement and crushed rock from the McLaughlin Material Company, securing the greater part of his material through local dealers. His usual formula of 1:2:4 has proved satisfactory to his customers. Business has been good in his territory.

T. Thurston Culp, chief bookkeeper of the Lehigh Portland Cement Company, was married August 19 to Miss Ida May Young, the daughter of Mr. and Mrs. Henry Young, of Cleveland, Ohio. They are now on a bridal tour in the East. They will make their home in Chicago.

#### CEMENT AND STEEL FOR RAILWAY SLEEPERS.

The following communication was recently issued in the Daily Consular and Trade Reports of the Bureau of Manufactures, Washington, D. C. The address of the firm in question can be had by mentioning the file number:

No. 7278—An American consular officer in a Latin-American country reports that a railway company operating about 100 miles of railway in the country in which he is located intends to replace the wooden sleepers on its lines by reinforced concrete sleepers. The management will be glad to receive proposals for the sale of the steel and cement needed for this work.

Shoup, Jones & Cox, who are manufacturers of cement blocks and other cement products at Lincoln, Ill., are going to enlarge their building to accommodate the rapid growth of their business. They have at present a capacity of 75,000 blocks.

The National Association of Cement Users are taking a ballot on a proposed revision of the by-laws, and also the adoption of the proposed standard specifications for scrubbed concrete surface.





## The National Builders' Supply Association

Meets Annually.

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Official Organ, ROCK PRODUCTS

### PLAIN TALK FOR RETAILERS.

One reason we cannot have more system in the builders' supply business is the lack of uniformity in the trade itself. Except in metropolitan centers we may expect to find almost any kind of a merchant selling cement, plaster and lime. The character of the merchant varies with the locality in which we find him. The development of the builders' supply business as a separate and distinct trade must then, of necessity, be a somewhat slow process. Rules and regulations governing the business cannot be laid down with the same precision as they can in other lines of merchandising. All interests must be harmonized, or else there will be a jarring note.

We urge upon the retailers of supplies to organize local and state organizations whenever possible, as it is only by closer communion that the business can be lifted to a higher plane. Until such a time there can be little co-operation.

Such a condition has existed in the early life of every trade. The evolution is slow but sure. This is an age of specialism, and the time will come when builders' supplies will be handled exclusively in every town and hamlet on the globe. We are growing, and as we grow we specialize more and more. All of you can remember the general stores of our boyhood days, the stores that sold everything needed in the town. As the town grew, merchants sprang up who handled only one line of goods, and by specializing in that one line were able to give better service, give a better selection and come to a better understanding of the needs and requirements of their patrons, and thus the business grew and prospered. It created a want where one did not exist before, and met the want.

Each retailer of builders' supplies in a town can do the same thing. Study the business, find out what is new, and by introducing new materials and commodities create the business. Do not wait for the other fellow to do it; do it first. Get it introduced and build up your trade before the other fellow wakes up.

Trade papers are so highly specialized nowadays that they do not appeal to a man outside of the trade, but they are an essential factor in the development of the business, because they are the harbingers of the tidings about the new things in the trade and the further development of the old and tried things.

The retailer can profit by a close study of ROCK PRODUCTS each month, scan every line closely and read every advertisement. Familiarize yourself with the progress that is being made all over the country and try to apply it in your own community.

ROCK PRODUCTS maintains a free Information Bureau for the benefit of its readers, and, while we are happy to say that many of them are making free use of it to their advantage, there are many who seem to be content to plod along in the old way.

Don't be afraid to ask questions; we are here to give you information on any subject within the scope of the trade, without any cost to you, for the sole purpose of building up the industry and enabling every man to make more money and build up his business. Our object is not entirely an unselfish one, because it must be apparent to every one that your success is our success, and as the industry improves and prospers, so do we in like ratio.

### A GOLDEN OPPORTUNITY.

There is a golden opportunity for the retailer of builders' supplies in the block machine, the brick machine and the tile machine. It is in the employment of the spare time of the men about the yard in the making of blocks, brick and tile. There are very few yards, especially in the smaller towns, in which there is not waste time that could be used profitably for this purpose.

How could the business be started? Well, you know that the farmer needs concrete blocks for his buildings, for foundations at least, and for other structures. He often needs tile for drainage, and he is interested in cement brick. These concrete products you could produce on order, and it would not be necessary to carry a large stock. You have the cement, and you can get the sand and the crushed rock. You have the men who are lying about idle much of the time. The labor of production will cost practically nothing additional to what you are now expending.

The makers of the machines will give full instructions how to use them, and it will be to your interest to look into this matter. The machinery people will co-operate with you in every way.

Many retailers are already manufacturing and selling concrete blocks and other concrete products, and they have found them very profitable. The concrete block has come to stay; in many communities they are standardized, the same as brick, and the architect and contractor is beginning to

appreciate and understand them better, with the result that there is a continued, steady demand most everywhere. If there should be a community where the concrete block is unknown, so much the better, because the dealer will be thereby enabled to put the first concrete products on sale in his locality and build up a nice business before he has any competition. ROCK PRODUCTS will furnish any retailer with the names of good machines and cost data, if desired.

### PROGRESSIVE BALTIMORE DEALER.

We publish in this issue a photograph of the permanent exhibit maintained in the Builders' Exchange of Baltimore, Md., by Robert S. Green, one of the largest dealers in builders' supplies in the East. As the cut shows, his line is most complete, comprising over one hundred different wants of the contractor.

Mr. Green has many contracts on hand at present, among which are cement, for the city of Baltimore high pressure fire pumping station; paving of Harford, Belair and Liberty roads and Garrison avenue; St. Mary's Industrial School; St. Agnes' Hospital; Hochschild & Kohn's large department store; gas and electric garage; Maryland State Hospital for the Insane, Sykesville, Md.; Pennsylvania State Hospital for the Insane, Fairview, Wayne County, Pennsylvania; Montgomery County High School, Brandywine, Md.; Starr M. P. Church; also hydrated lime plaster, etc., for the large 18-story Munsey Building, Emerson Tower, Emerson Hotel and many other large buildings through Maryland, Delaware, Pennsylvania and New Jersey.

This is Mr. Green's twenty-fourth year in catering to the wants of the contractor and building supply dealer. He has a good organization and three convenient yard and storage warehouses in Baltimore City, giving him the advantage of making prompt shipments over every railroad entering the city. His leaders are Edison Portland cement, "Rocky Mount" hydrated lime, Akron hard wall plaster, Keystone concrete coatings and waterproofing compounds, sewer pipe, oyster shell lime, etc.

Thomas E. Thompson, the well known builder and dealer in building supplies of Baltimore, Md., who is to superintend the construction of the 18-story office building of the American Trust & Savings Bank, is in Birmingham, Ala. Work upon the superstructure of the skyscraper is now in progress and work upon the building will start in the near future.



ROBERT S. GREEN'S PERMANENT EXHIBIT AT BUILDERS' EXCHANGE, BALTIMORE, MD.



## FISCHER OF MEMPHIS

**Phenomenal Growth of Enterprising Builders' Supply Concern in the Southland—Finest Equipment in the Business.**

A little more than five years ago W. W. Fischer, of Memphis, Tenn., organized the Fischer Lime and Cement Company, associating several members of his own family and one or two close personal friends, with sound financial backing. Mr. Fischer had at that time ten years of experience in the builders' supply business, for he began as office boy with the leading supply concern of those days and successively did service in every department from entry clerk to warehouseman and head teamster. When only a beardless youth he had risen to the position of virtual general manager of very extensive building material operations in his native city. He possessed a wider acquaintance with the contractors and builders than any other man in Memphis—and, what is even more important, he knew the credit value of practically every possible customer at the time he organized his own company. With such a foundation the success of the enterprise was a foregone conclusion, and it has been realized in larger numbers than any reasonable expectations at the start.

The Fischer Lime & Cement Company started out with ROCK PRODUCTS as its corner stone, for the paper was in evidence before the first carload of materials arrived—and it has been on hand ever since with each succeeding number, as the fireside companion of the progressive organization that has always been a feature of the Fischer establishment.

Still a young man, Mr. Fischer has won his way to the front rank of business men in Memphis, characteristic of the type that is doing things in the newly awakened South. As president of the Memphis Builders' Exchange, an organization of all the building interests of the city, he made his mark as an able, earnest and aggressive leader in securing harmony and fair practices among the contractors and the producers of materials and masons' supplies. His capacity to take the initiative has been demonstrated. There is always more coming and more to be expected of a man of this kind. With the wonderful growth of his business the man has grown also—both are still growing, and the end is not yet.

Today this concern enjoys an extensive jobbing business in the thriving section which surrounds Memphis—and no city of its class showed so great a growth as Memphis in the last national census. Big jobs now running are the Union Railroad Station, nearing completion; the West Tennessee Normal School, just begun; the Central Police Station, and the Moore Dry Goods House; these and a full list of lesser buildings assure the activities of the coming winter, for in the latitude of Memphis there is no cessation of building on account of weather conditions.

Three years ago the Fischer Lime and Cement Company built a warehouse and office for the accommodation of its business, which at that time was thought to be all-sufficient for any reasonable growth, but it soon became apparent that even greater facilities would have to be provided. The lot of land comprising the entire city block bounded by Walnut, Linden and Pontotoc streets and the Southern Railway, was secured about one year ago, and during the present summer a new business home was built for the company. Our illustration shows the whole plant, consisting of office, warehouse and yard.

The office building is two stories and base-

ment, 40 by 92 feet. The warehouse is 92 by 300 feet. Concrete with stone trimmings appear in the work, the warehouse being entirely of reinforced concrete, floor, walls and roof, with two railway tracks approaching the same, with a capacity of thirty cars at a time. Individual flat-top sanitary desks in quartered oak and with glass tops are arranged for each officer and salesman. The finishings of the room are in birch. The doors and windows are of plate glass in magohany, from Biswanger, Memphis. The floors are of hardwood. Fire and burglar-proof safe and vault appear on the south of the office.

With elegant office appointments and the most modern warehouse known to the builders' supply business of this country, this progressive concern conducts its affairs with dignity and dispatch. The supply house of Fischer of Memphis is well worthy of duplication in other places where the least attention in the world is given to appearances and the surroundings of important business enterprises. Without making any noise about it, this concern has developed a system of keeping track of the extensive stocks that are necessarily carried by such an institution, as well as the deliveries from day to day.

Mr. Fischer is a prominent member of the National Builders' Supply Association, having served as the vice-president for the State of Tennessee. He always takes an active part in the meetings and is an out-and-out retailer of builders' supplies who believes in fair play in business all around—the unparalleled success of his own concern demonstrating how much the building public of Memphis appreciate this principle.

### FARMERS USING CEMENT.

New Comerstown, O., Sept. 16.—The retailers of builders' supplies here have not had a very busy season, as there has not been very much new building going on and there doesn't seem to be any immediate prospects of a big change in the situation this fall. This city, one of the oldest and most conservative in the state, enjoys a steady natural growth and that is all. What it needs is some big manufacturing projects, as the city is well located, being at the junction of two railroads and having the canal as well.

James Cole has been handling builders' supplies here for many years, although it has only been about two years ago that he has been running the business alone. He handles Atlas Portland cement, Monarch Wood Fibre and 20th Century Pulp of the American Gypsum Company, Paroid Roofing, lumber, sewer pipe, lath, slate, etc. He says that the farmers have been using enormous quantities of cement, seeming to understand quite well how to get the best results.

J. S. Barnett & Co. is the oldest builders' supply firm here and report a steady demand throughout the season. They handle Universal Portland cement and a complete line of builders' supplies. The firm is composed of J. S. Barnett and his son. Mr. Barnett says the prospects for fall business are fair.

The New Haven Lumber & Supply Co., of New Haven, Ind., who are retailers of lumber and cement, are going to put in a stock of plaster and coal.

### NEW YORK RETAILERS.

New York, N. Y., Sept. 18.—There was very little doing in the local building material market during the past four weeks. The demand for material was not as good as the previous month. Dealers are not purchasing supplies liberally, and business is being transacted in a hand-to-mouth way. The spell of rainy weather experienced during the latter part of August brought work to a standstill and retarded business considerably. Some dealers claim that business conditions will improve later in the fall, while others are of the opinion that trading will not be normal during the balance of 1911.

A. E. Foster, of the Empire Brick & Supply Company, remarked: "Dealers are carrying normal supplies, conditioned on contracts. I expect the market to continue to rule around the present price level for some time. Business is less active."

Frank Vernon, of W. F. Vernon, said: "Business as a rule is poor. However, we are doing twice as much as a year ago, but this is due to the fact that some of the big interests whose business we handle are carrying on extensive work. We received the Woolworth Building contract, for example, involving 77,000 barrels of cement, and the McAlpin Hotel, calling for 38,000 barrels, covering work for this fall, winter and spring. In a general way building operations, I believe, have been checked to some extent by the unsettlement of securities on the Stock Exchange, which has occasioned more or less of a hesitancy in various quarters."

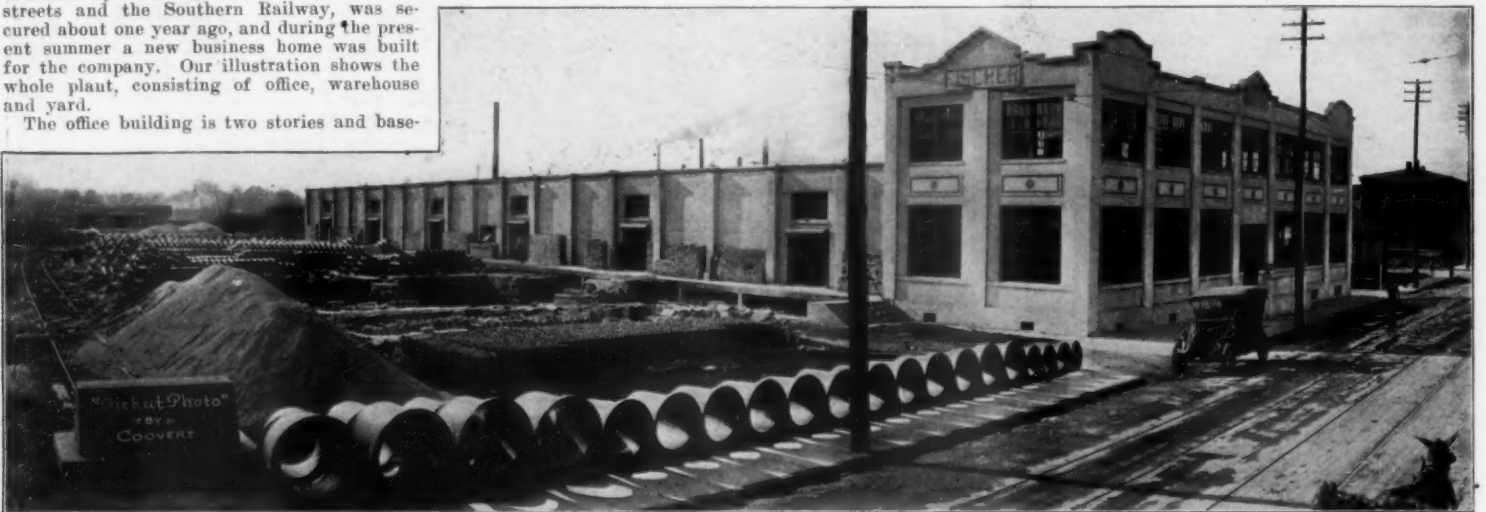
"The outlook is uncertain. Rumors have been current of another reduction in prices, but I am told they are not true. The opinion prevails that many dealers are carrying good-sized stocks, due to purchases made early in the year around \$1.25. Cement is now obtainable at \$1.10@1.15 at the mill."

A representative of J. P. Kane & Co., which concern secured the New York Central contract covering the new mammoth station and adjoining buildings, which will require 100,000 barrels of cement, and also the Municipal Building, which will call for 80,000 barrels of cement, said: "There is more doing with us than a year ago. We do not look for any advance in prices. We are not loaded up with stocks. We cover our jobs as they come in. In other words, we buy according to requirements."

E. B. Morse, of the Frank B. Morse Co., speaking of business in the local cement trade during the past month, added: "The demand for cement during the first two weeks of the past month was fairly good, but the spell of rainy weather during the last week of August, and the three days' holiday, has retarded business a great deal."

The Majestic Construction Company, of Manhattan, has been incorporated with a capital stock of \$100,000 to carry on a construction and real estate business. The incorporators are: A. Feldheim, I. H. Wolfe, of New York City, and G. R. Thomson, of Rutherford, N. J.

Dower-Finkle Construction Company, Roselle Park, N. J., obtained a charter under New Jersey state laws August 8; capital \$50,000.



OFFICE AND WAREHOUSE NO. 1 OF THE FISCHER LIME & CEMENT COMPANY, MEMPHIS, TENN.

# MOTOR TRUCKS

**Manufacturers and Retailers of Builders' Supplies Alive to the Necessity of Better and More Economical Methods of Transportation.**

Building material men have been studying the subject of motor truck delivery for a number of years, and quite a large number of firms have installed them with the most satisfactory results. No association meeting of dealers, whether it be a state organization or the national body, has a program of addresses up to date, unless it includes something on the subject of motor trucks. The dealers are interested, and they are buying them.

The purpose of this article is to tell the dealer something on the subject that will aid him in arriving at a conclusion. It is said that every man

The fact is that the horse is not a proper means of delivery, and this was simply emphasized by the conditions which prevailed. It is simply one more charge against the horse delivery system.

It has long been claimed that the city is not the proper place for the horse. The old claim that he is too slow, and, with his wagon, occupies too much room, has been brought forward many, many times, and the recent experience of many owners simply adds another point in favor of the auto truck. Beyond a doubt the introduction of the truck is the only proper solution of the hot weather delivery problem. It is faster and will not be affected by the heat, and while the truck may suffer a breakdown, owing to various causes, it can be repaired, which is not the case with the horse. Let a horse injure himself in any way, and as a rule, he is put to death at once. To all careful thinkers the introduction and exclusive use of trucks in the city, offers the only solution to the present condition of congested traffic. Each is enabled to replace three to five horses and when it is necessary a single truck does not occupy as

## COMPARATIVE COSTS OF HAULING BY HORSES AND BY MOTOR TRUCKS

	Cost per day	No. tons carried per load	Daily av'ge No. miles loaded	No. miles loaded	No. ton mile loaded one way only	Cost per ton mile
1-horse wagon and driver.....	\$ 4.00	1	22	11	11	36c
2-horse wagon and driver.....	6.00	3	20	10	30	20c
3-horse wagon and driver.....	8.00	5	18	9	45	18c
1-ton motor truck.....	8.00	1	80	40	40	20c
2-ton motor truck.....	10.00	2	70	35	70	14c
3-ton motor truck.....	12.00	3	60	30	90	13c
5-ton motor truck.....	15.00	5	50	25	125	12c
7-ton motor truck.....	16.50	7	46	23	161	10 1/4 c
10-ton motor truck.....	18.50	10	38	19	190	9 1/2 c

on earth with real red blood in him either owns an automobile or wishes he did. The dealers who own auto trucks are glad of it, and the time is at hand when every dealer will wish he had such a delivery conveyance.

It is, of course, the matter of cost that determines in every case the wisdom of making use of anything new. It is probably true that the average dealer keeps no accurate account of the cost of maintaining his teams.

If the proper items are charged up for depreciation and upkeep of horses, wagons and harness, stable expenses, etc., the round figures of \$6 a day for a two-horse team and \$8 a day for a three-horse team will be about right for ordinary work. Twenty miles a day is the limit for a light vehicle, and sixteen to eighteen miles for a three-ton load, or a three-horse shift for five tons. To cover the mileage mentioned horses have to be on the move five or six hours a day. The remaining four or five hours can be used in loading and unloading.

But what about the motor truck? It requires no rest. It is a fact that the ordinary motor truck is capable of three or four times the mileage of horses, and customers will get quicker delivery and the dealer will be able to reach out further into new territory and get business where he can deliver materials. The following table of costs has been compiled by one firm that has made long and careful observations, and they are regarded by the motor truck trade as authoritative:

It is often the practice in cities to compel the horse to work as many hours during the summer time as in the winter. There is no reduction in his hours of work, and he is expected to carry as big a load. It is estimated that in New York City alone, over 2,000 horses died because of the effects of the heat, recently. Beyond a doubt a large part of these deaths were due to the unkindness of their drivers and the hard treatment to which the horses were subjected. Many individuals, however, are far more considerate of their horses and shorten the hours during the terrific heat. This, however, was not enough in many cases to prevent the death of the animal. Of course, many attempts were made to assist the horse to continue the work, and it was not an uncommon sight to see horses standing at the curb being sprinkled or sponged off. But in spite of all these precautions, almost every block, at some time or other, claimed its victims. Of course, the putting out of commission of such a large number of animals has a very disastrous effect upon the delivery system of the country. Much delay was experienced in the delivery of bread, ice cream, drinking water and other necessities of life, and many families suffered considerable distress upon this account. In some sections of New York City it is claimed a famine of certain necessities of life was brought about through the inability to make deliveries.

much space as the team and the dray. The relief which may be obtained by their use, is at once evident. Because of these conditions and the inability of the horse to perform his work as has been clearly shown by experience in summer and winter, it is a foregone conclusion that the time is not far distant when the trucks will take the place of the horse for city service.

The Warren Art Stone Company, of Warren, Ohio, is showing an exceptionally fine line of cement blocks and other products of its works at the country fairs in northern Ohio.

## INDUSTRIAL EXPOSITION

Opened the 18th, Closes the 30th of September, Whitmore, Rauber & Vicinius' the Most Elaborate and Attractive Display There.

Rochester, N. Y., Sept. 18.—One of the most elaborate, attractive and expensive displays made at the Rochester Industrial Exposition which opened here today and which will close the 30th of September, is that of Whitmore, Rauber & Vicinius. It is a house, 21 feet long, 14 feet high and 10 feet wide, built entirely of hollow tile manufactured by the Pauly system. The exterior is of stucco, dark finish, entirely covered with a coat of Wadsworth, Howland Bay State waterproof coating. It contains an electrical illuminated fireplace and is the greatest attraction at the Exposition to the thousands of visitors who go there daily.

Whitmore, Rauber & Vicinius operate an asphalt plant, stone quarry, producing crushed rock, a concrete tile plant under the Pauly system, a cement block plant, cut stone and masons' supplies yards, are centrally located within the city limits of Rochester. The business was established in 1875 and their general offices are at 279 South avenue. Their warehouses are located on the New York Central, Hudson River, Lehigh Valley and Rome, Watertown & Ogdensburg Railroads. The storage capacity of the warehouses is 35,000 barrels of cement, plaster, etc. They use 110 teams for handling materials to jobs in all parts of the city. The output of their concrete tile plant is 6,000 tile per day and the capacity of the cement block plant is unlimited in number of concrete blocks.

In their builders' supply yard, located at 279 South avenue and the Erie Canal, the following materials are handled: Atlas, Cayuga and Universal Portland cements, and the white Portland cements of the Atlas and Sandusky Portland Cement Companies, the Niagara Gypsum Company's Niagara pearl wood fibre and pearl sanded plasters; Scioto Lime Company and Woodville Lime & Cement Company's hydrate of lime; plaster of Paris, marble dust and plaster board of J. B. King & Co.; pressed brick of the Kushequa Pressed Brick Company, of Kushequa, Pa., and Pittsburgh and Buffalo pressed brick of the United Sewer Pipe Company, of Pittsburgh; sewer pipe of the Rochester Sewer Pipe Company; drain tile of the German Brick & Tile Company, Rochester; metal lath and concrete reinforcement of the General Fire Proofing Company, of Youngstown, Ohio; mortar colors of the Atlas Manufacturing Company, Newark, N. J.; fire brick and fire clay of the Burns Fire Brick



WHITE FIVE-TON TRUCK RECENTLY PURCHASED BY THE CLEVELAND BUILDERS SUPPLY COMPANY.



Company, of Williamsport, Pa.; the Berger System of sidewalk lights; dynamite of the Dupont Powder Company; sand, gravel and crushed stone. J. M. Hamilton is the manager of the builders' supplies department.

The stone yard and interior marble finishing plant under the supervision of L. S. Whitmore, secretary and treasurer of the company, is located at the corner of Griffith street and Clinton avenue, south. It has a frontage on these streets of 200x1,000 feet. The ground floor of the building, 30'x200', is used for the cutting shed and the upper floor is used for cutting, polishing and finishing marble. Its equipment consists of a 100-horsepower engine and 125-horsepower boiler; a 12-ton derrick, 5-ton hand traveling crane, 1 Scofield (Chicago) gang saw, 1 Ruggles (Vt.) circular saw, one large and one small Lincoln Iron Works planer, 3 automatic Dallett surfacing machines and one stone lathe installed by the W. F. Davis Machine Company, of Rochester. In the marble plant are used one Patch rubbing bed, two Patch polishing machines, a combination counter sinking and moulding machine installed by the Riehle Manufacturing Company, of Philadelphia, one lathe and one power saw. Eighty men are employed in this department. Large contracts are taken for city work and furnishing cut stone for public, private buildings and residences. Large quantities of Indiana oolitic limestone, Ohio sandstone and Medina (N. Y.) stone are cut in this great stone yard. The officers of the company, which is incorporated, are V. F. Whitmore, president; John N. Rauber, vice president, and L. S. Whitmore, secretary and treasurer.

#### MEMPHIS RETAILERS.

Memphis, Tenn., September 12.—The Fischer Lime & Cement Company is furnishing considerable cement for the William R. Moore & Co. wholesale drygoods house going up in the downtown section. The structure will cost about \$250,000. For the Memphis police station, a \$300,000 contract, the same firm is furnishing much cement. They report business good in all building lines and fair on municipal work.

The C. B. Barker Construction Company was recently organized here for the purpose of engaging in general construction work. The capital stock is \$10,000. A. F. Schleber, C. B. Barker and others are the incorporators.

The Illinois Central Railroad is rapidly making preparation to start on its new depot here, at the site of the old Union Station. A. S. Baldwin, chief engineer of the company, from Chicago, has been here to lay out the work. The cost will be \$100,000.

Memphis showed a gain of 12 per cent on building last month, outstripping all cities except Atlanta in the South.

Crump Bros. are now operating a cement and plaster retail business in the southeast section of town.

#### SAN FRANCISCO RETAILERS.

San Francisco, Sept. 14.—The manufacturers of most descriptions of building materials describe business as quiet, and it is certain that the amount of material required for large operations this summer has been disappointingly small. The retail business, however, continues in very good shape, not only in San Francisco but in practically all parts of the state. Permits were issued in this city last month for buildings valued at \$2,139,095, only a slight increase over the previous month, but a gain of more than \$500,000 over the same period of last year. Los Angeles and Oakland are also keeping well ahead of last year, and reports of great activity have been received from many towns in the interior. With fair crops throughout the state, and high prices for all agricultural products, permanent materials are being used to a larger extent than ever in the country, and dealers in the smaller towns believe that many additional improvements will be carried out before the rains begin.

The contract for the concrete piles and foundations of the warehouse extension of the Laughlin works of the American Sheet & Tin Plate Company at Martin's Ferry, Ohio, has been awarded to the Raymond Concrete Pile Company, of New York and Chicago, G. C. Kimball, chief engineer.

The Hollow Metal Construction Company, of Jersey City, N. J., has been incorporated with a capital stock of \$150,000, to manufacture metal building material. The incorporators are: M. C. Duane, N. E. Wiggins and G. W. Everett, all of New York City.

#### ILLINOIS RETAILERS.

Springfield, Ill., September 18.—The Aurora Sand and Gravel Company of Aurora has been incorporated with a capital stock of \$5,000 to deal in sand, cement and concrete articles. The incorporators are Joseph O'Hara, Harris Bliss and Albert J. Erlenborn.

Part of the success of the great Champaign County Fair last month was due to the work of Arthur W. Walls, the Champaign retailer who is a member of the board.

Andrews Brothers, of Canton, have been busy bringing strings of customers twenty miles overland, something unusual in well-settled Illinois.

David Hurley, 78 years old, one of the pioneer retailers of central Illinois, is dead at his home in Saybrook.

Eugene L. Conklin, secretary of the Conklin-Reuling Lumber Company of Pekin, and Miss Edna M. O'Brien, of Groveland, were married August 22 at Pekin. The groom, president of the Commercial Club and Retail Merchants' Association is one of the most prominent retailers in the State.

H. W. Baker, of the Atlas Portland Cement Company, and Scott Wright, of the River Lumber Company, of Hannibal, Mo., were among the party of boosters from that city who toured a dozen Illinois towns last month.

For a small town Nokomis has been a good field. In July carload shipments were received at that station as follows: Brick, 36; sand, 49; tile, 19; cement, 4; stone, 18.

The Isaac Hill Lumber Company, of Hillsboro, has opened a branch yard at Taylor Springs, a rapidly growing town near Hillsboro. A 60-carload order for the new smelter plant is a good starter.

John Brogan, of Green Bay, Wis., got the \$25,743 contract for the north side sewer at Waukegan.

As a help to sand and gravel retailers at Quincy the landing at the foot of Broadway street, on the Mississippi, probably will be paved by the city.

The Sheldon Brick Company, of Champaign, is doing a big business in its fireplace brick—a hard, deep red with dark green borders and dark green lines on the surface of the edges. It is laid in black mortar and makes a striking effect. Inquiries have come from as far west as California.

W. H. Webster, a real estate man of Woodstock, is a new dealer in as well as manufacturer of concrete posts. He will establish a second plant at Union.

Harrisburg's city council has drafted an ordinance creating a new concrete sidewalk district, in which the proposed improvements are estimated at \$41,300.

Rockford passed ordinances for seven jobs of brick paving totalling \$65,000.

The Tri-City Construction Company, of Davenport, Iowa, was awarded the contract to pave State street, East Moline, for \$24,900.

The over-enterprising Raymond Tile & Cement Company, of Raymond, took advantage of the central Illinois drought to remind farmers that tile not only keeps the land dry in wet seasons, but moist in dry seasons.

Hanes & Sons, of Cairo, supplied 3,500 concrete piers for the new Sears, Roebuck & Co. factories in that city.

O'Rourke & Ridge will pave West Eleventh, East Fourth, Broadway and Seventh avenue, in Sterling, with brick for \$48,504.

The E. H. Fette Lumber Company, of Havana, is having a new shed and an office erected, including two new houses for lime and cement. All are 2-story and will be needed to handle the stock which is assured by the hustling manager, "Ed" Fette.

The Wilbur Lumber Company, of Dixon, has purchased the stock of the Emerson Lumber Company and the site now occupied by the latter company. This gives an excellent location on the belt line of the railroads, and new yards will be constructed at once.

Dealing in building materials is one of the objects of the recently incorporated Peterstown Farmers' Elevator and Supply Company of Peterstown. The incorporators of the company, which has a capital stock of \$3,400, are John A. Klein, Theodore Rapp and John Sondergott.

Ordinances have been submitted at Champaign for the paving of an alley, \$6,300, and Lynn street, \$22,600.

Lanyon & Clifford, of Waukegan, were awarded the \$74,000 sewer contract in Arlington Heights.

The Fourteenth Street Paving District contract at Murphysboro was given to Myer & Thomas for \$32,368.

The Sadorus Lumber Co., of Sadorus, Ill., are in the market for a concrete block machine. They are retailers of builders' supplies of all kinds.

#### DENVER RETAILERS.

Denver, Colo., Sept. 18.—B. F. Threewit, dealer in lime, plaster and cement, has now become established in his new concrete warehouse at 1425 to 1439 Wynkoop street. The new place of business has excellent truckage facilities, being situated on the Denver & Rio Grande Railway, Union Pacific Railway and the Missouri Pacific Railway. The frontage takes in one hundred feet, fifty feet of which is unloading docks. All cars unloaded are within fifty feet of the place where they are to be piled and a great many cars can thus be unloaded in a minimum length of time.

The office building is also of concrete and is light and airy. The office building also contains a cement floor. The office adjoins the warehouse and is very convenient to the yard.

Among the different things that are always carried in stock are bulk and barrel lime, hard wall plasters—namely, Buck Horn, Ideal, Acme, Red Buttes and Agatite. The cements found here are Ideal, Sunflower, Iola and Concrete brands. A large stock of the products of the Trussed Concrete Steel Company, of Detroit, are always on hand, as he is a territory agent.

Mortar colors have been in great favor here also. There is to be found any color that is desired. All brick masons' and plasters' tools are to be had here.

Efficiency of service is the one thing that is always found. To take care of deliveries he has nine splendid teams and as many first class wagons, covering everything from a light spring wagon to a heavy transfer. Business, though on the decline for the last six months, has taken a turn for the better, and gives all indications of a busy season this coming fall.

The Masons' Supply Company is located at 777 Wazee street, Denver, Colo., and carries a full line of all lime and cement products. The president of the company is Charles Butler and the secretary is George F. Yates. This firm has been doing business at this address for the last five years and has sold some of the largest jobs that have been carried on in Denver. The yard is situated on the Denver & Rio Grande Railway and also the Rock Island tracks, and loading and unloading facilities are the best. A full line of plaster, cement and all miscellaneous building sundries are carried and business is generally very good.

Francis J. Fisher, dealer in lime, plaster and cement, has just opened offices in the new Chamber of Commerce Building. His yard is situated at 19th and Delaney streets and is on the Rock Island, Colorado & Southern and Union Pacific railroads. Among the large jobs now being furnished are the Aaron Grove School, Oleson Apartments, St. Joseph's Hospital and other medium sized and small work. Mr. Fisher has been in business in Denver for twenty years and has established a good road business as well as city trade. Among the materials handled are Missouri lime, both lump and hydrated, grey lime plasters and cements.

Shaw & McKay, dealers in builders' material, have recently moved into their new office and warehouse at 2549 Huron street. Business has been very good with this firm and their teams have been kept busy at all times. The market has been very active in the grey lime direction, and as Shaw & McKay control a kiln in the Platte Canon, this has also been very active. Beside lime, cement and plaster this firm also handles coal, hay and grain.

Henry Wagner & Son, dealers in lime, plaster and cement, located at 15th and Delaney streets, report that all teams are being kept very busy at the present time and business is generally good. They are now furnishing material on a number of the larger buildings under construction besides the large following of small trade. Their place of business is on the Colorado & Southern Railway, and also the Union Pacific and Rock Island railroads. They employ three regular teams and as a rule have at least one extra team on the street. As soon as the new spur of the Union Pacific reaches to LL and Wazee streets they intend to erect a new office and warehouse, where they will have even a better location than they now have.

The Jones-Heartz Lime Company is one of the most promising of the new firms in town. This concern is now but two years old and can claim its share of the business at any time. They are located on Colfax avenue and 7th street, on the Denver & Rio Grande Railroad, and also on the Colorado & Southern. They can at all times keep their three teams busy. Both having gained their knowledge of the business out of the office of a larger concern with whom they were with for a number of years, and having a large acquaintance among the building trades, their future seems to hold a great deal in store. They carry Marblehead lime, Colorado plasters and Portland cements, lath and other building sundries.



### CHICAGO RETAILERS.

Chicago, Sept. 21.—The builders' supply business here is very good this month. Dealers are beginning to figure up their year's receipts and reckon this year's trade with that of 1910, and in all respects its compares favorably, notwithstanding the fact that for several months there was practically nothing doing in the building line. This was due to the animosity between the plumbers' and steamfitters' unions. The differences between these two important unions have now been settled to the satisfaction of the contending parties and the impetus given building by this settlement has advanced the supply trade to a point it has not reached before this year.

Besides the increased demand prices have improved and there is a better feeling in general among the trade.

The larger builders' supply yards are having all they can do to meet the demand for sand, gravel, cement, plaster and lime and the prospects are that this demand will continue for some months at least.

Street paving work is proving a great help to the dealers in that it is using up a lot of crushed rock and cement and the kindred materials.

Most of the dealers here handle more than one brand of cement and have a good demand for all of them. Torpedo and bank sand are handled by all the dealers and prices on these materials are fairly satisfactory. Lime is one of the largest sellers of the retailer. There are a large number of the retailers who are handling hydrated lime and they say that the demand for this product is becoming more and more universal.

A. J. Witty, who manages the local office of the William E. Dee Company, stated that this year's business had been a good one. Their principal line, however, is sewer-pipe, and cement and other materials are handled only as a side line. Notwithstanding this the above company deals in Universal, Atlas and Chicago "AA" Portland cements and also handles the Peerless brand of Portland cement. Mr. Witty said in speaking of conditions:

"Business in the cement line is not very good just at the present time and prices are low, but the settlement of the strike will probably soon prove of benefit to us. Our yards in Chicago handle all kinds of builders' supplies but our principal line is sewer pipe."

A representative of the Lake Building Material Company, one of the large retail yards on the West Side, stated that their business was good this month and had been satisfactory all year. This company handles everything necessary to the builder and enjoys the reputation of a very progressive firm. Their representative said: "Prospects with us are bright and the demand continues to become heavier. Prices have not been as high as we could wish but are fairly good. Lime and cement have advanced a little recently. We look for a steady improvement."

The Tuthill Building Material Company, which has a large retail yard on Sixty-third street, on the South side, reported business about the same as last month, with some improvement noted in the demand and prices. They said that trade in general was looking much brighter than a month ago.

William Ord, sales engineer of the Chicago Builders' Specialty Company, which sells everything metal for builders, stated: "Business was quiet for a while but the last few weeks it has been getting better and is now holding up remarkably well for this time of the year. Prospects are fine. The local trade is good and all the big contractors are buying well. There are a lot of good inquiries for machinery and trade in general looks good."

The above company has recently put on the market a special street paving mixer used for concrete foundations for pavements and also particularly well adapted for concrete roads. It has heavy traction wheels and traction gearing.

The Union Coal, Lime & Cement Company, another of the large West side retail yards, always has a fair trade and recent reports show that their trade is increasing.

The two yards of the Templeton Lime Company, in which are handled every kind of material for building are busy and the outlook for the next month or so is good. J. B. Coates, formerly with the Crescent Material Company, whose South side yard was purchased by the Templeton Lime Company, is now connected with the latter concern.

The Standard Material Company is one of the largest handlers of supplies on the South side and at the present time is busy. This company carries all kinds of building materials.

The American Concrete Mold Company has recently opened offices at 1002 Marquette Building, Chicago. This company was incorporated under the state laws of West Virginia with a capital stock of \$400,000. The officers are: J. H. D. Egan,

president; E. W. Utzler, vice-president, and J. S. Prince, secretary and treasurer. The company will manufacture and lease various kinds of concrete molds to contractors all over the country. Mr. Prince said that although up to date very little had been done, prospects were good and they soon expected to have a good business on hand.

The Chicago Building Material Company, with offices at 701 Unity building, is a large handler of building materials. This company sells lime, plaster, cement, sand, gravel, crushed rock and other materials. R. C. Graham is the manager. The company enjoys a good trade at the present time and believes that there will be a good fall demand.

J. R. Craig, president of the Craig Building Material Company, 17 North La Salle street, says that business has not been extra good this past month. This company makes a specialty of torpedo and bank sand, and while it handles other building materials as well, their greatest demand is for sand. Mr. Craig stated:

"Prospects for an increased fall trade are bright and in general local conditions are promising. I believe that business will soon pick up."

The McLaughlin Building Material Company, one of the largest retailers in Chicago, reported business good and fall prospects bright.

### NEW ROCHESTER FIRM.

Theodore J. Swan, with office in the Powers Building on the fourth floor, started in business last February, selling in carload lots tile fireproofing and facing brick. He does a large volume of trade in New York, Massachusetts and Connecticut. His trade is increasing rapidly and he reports business very brisk.

### WELL-APPEARING RETAIL YARDS.

B. P. Andrews & Son, operating a number of retail yards throughout Illinois, do not see any reason why yards and sheds should resemble barns on the exterior. Their quarters at Jacksonville, Ill., while not so handsome as some of their others, conform to this theory and give a respectful atmosphere to the many business transactions made there. The accompanying photograph shows the main yard and sheds, which are a block in extent. The annex, which is across the street, is as large and fully as modern and well maintained as any yard in any city the size of Jacksonville. Among the standard brands handled by the firm are Sandusky Portland cement, Marblehead and Huntington lime, Acme plaster, sand and gravel from Hannibal, Mo., sold by the St. Louis Sand & Gravel Company; crushed rock from the Lockyer Quarry Company at Alton; drain tile from the National Drain Tile Company of Terre Haute, Ind.; the White Hall Sewer Pipe and Stoneware Company of White Hall; the Macomb Sewer Pipe Company, and the Alton Stoneware & Pipe Company. Business has not been as good as last year, admitted Assistant Manager Joseph Jackson, but the ROCK PRODUCTS representative was assured that conditions would likely improve soon.

William R. Shore, the proprietor of the Ewart Lumber Co., of Ewart, Mich., will shortly build a concrete block warehouse 28 by 80 feet. He is in the market for a wet concrete block machine.



B. P. ANDREWS & SONS, JACKSONVILLE, ILL.

### LOUISVILLE RETAILERS.

Louisville, Ky., Sept. 15.—To say that conditions affecting the building supply trade of Louisville and vicinity, as well as the trade itself, have improved considerably within the past month is putting it mildly. To be sure, during the middle of August there was small opportunity for complaint on the part of the retailers, considering the season of the year, but at present the fraternity of roofing and cement is embarking upon a banner business period, the result of a record-breaking building year in the Kentucky metropolis.

The fall building season is just opening up, to offer a run of uninterrupted prosperity from now until the snow begins to fall.

The trade of the Union Cement & Lime Company, according to A. T. Kaiser, has been progressing with uniform excellence during the past month. Scattering rains have retarded several of the Union jobs to some extent, unfortunately, but the prospect is so favorable for the development of unusually big contracts to supplant these that nobody around the Main-street establishment is complaining.

After having been hard at work on several big roofing jobs for the past month, including the upper surfacing for the new Louisville & Nashville freight shed at Ninth street and Broadway, the National Roofing & Supply Company is still working as hard as ever. The report of the company says that a couple more big warehouse roofing contracts are scheduled to be awarded within the next fortnight or so and the National bid will undoubtedly figure prominently therein. The establishment has been renovated throughout, the exterior having been surfaced with gravel roofing and metal paint, affording a novel appearance, and everything is in fine shape to handle the coming fall rush.

Sam F. Troxell, of the Samuel F. Troxell Company, said that general lines of supplies are now moving in much better shape than they have for the past month or so. Mr. Troxell says that he does not anticipate the least diminution in activity for a couple of months at least.

The Culley Cement Block Company, dealers in cement, is moving an unusually large amount of material along this line at present. In catering to out-of-town business the Culley concern installed a big exhibit of cement and cement products at the Kentucky State Fair which began at the fair grounds in Louisville on September 11, to continue for a week's run.

Mason Maury, one of the leading architects of the city, is now drawing plans for the erection of the first apartment hotel building in Louisville.

The members of the Builders' Exchange of this city forgot that there was such a thing as plans or specifications September 4, Labor Day, when the entire organization gathered at Hike's Point to enjoy its annual picnic and outing. J. M. Vollmer, secretary of the Exchange, was major domo of the festivities, picking the line-ups for two crack baseball teams which opposed each other, and otherwise acting as official in the proceedings. E. G. Heartick, the genial president of the body, was honored with the post of water boy at the ball game, carrying his new duties with all executive dignity. The builders and supply men fraternized on the eventful day as they can do but once a year, for a continuous round of such gaiety will put the most robust structural artist out of commission in short order.

The joyous occasion wound up with an initiation of several novices into the Bools Bools, the secret order of the builders.



## OHIO RETAILERS AT CEDAR POINT.

(Continued from page 3.)

The meeting was scheduled to begin Friday morning, and some of the delegates, including the officers, arrived the day before and completed the arrangements for the entertainment and business sessions. The Breakers Hotel was selected for the headquarters, and the meeting was held in the general assembly hall, admirably adapted for the purpose.

The early arrivals were somewhat downhearted over the outlook, as there had been a steady down-pour of rain for several days, and Jupiter Pluvius didn't seem to be disposed to want to get off the job long enough to give the builders' supply men a chance. There is nothing so cheerless as a summer resort on a cold, rainy day, and many of the early arrivals felt like telegraphing home for overcoats. But along about noon old Sol, who had been making strenuous efforts to peep out all morning, finally got his blazing countenance out in full force, and it was not long before things began to happen. The very next boat from Sandusky brought a crowd, and so did the Eastland from Cleveland.

## Trip on the Spee Jacks.

In the afternoon A. Y. Gowen, of the Kelley Island Lime and Transport Co. and the Lehigh Portland Cement Co., took a party over to Marble Head and Kelley Island in his fine launch Spee Jacks, where a hurried view of the vast quarries and batteries of kilns were seen.

The immense concrete dock, only recently completed, is shown in one of the snapshots of the convention. A detailed description of this dock will be given in a later number of Rock Products. The dock is used to load the big steamers with rock for fluxing for the steel mills.

Many exclamations of wonder and pleasure were heard, not only about the points visited, but about the Spee Jacks. This launch is the private property of A. Y. Gowen, and cost about \$40,000 complete. It is the fastest, trimmest launch on the great lakes. It is luxuriously furnished in mahogany and polished brass and carries everything necessary for an extended cruise. It has 140 h. p. engines, which were originally built for a racing boat of a speed of forty miles an hour. When these same engines were installed in the Spee Jacks they were guaranteed to produce a speed of twenty-five miles an hour. As this boat will carry comfortably twenty-five or thirty people, it will be readily seen that this is a really remarkable speed. Mr. Gowen said that he had gone twenty-six miles an hour, but that, as a rule, he ran it at about eighteen miles an hour, which is a trifle

more than half speed. Several people asked Mr. Gowen how he got such a peculiar name for the boat. He explained it by saying that it was his college nickname.

Mr. Gowen proved a delightful host, and refreshments were served en route. Bert Swett was the only one on board who became seasick, and as he recovered before the boat returned to land, very few on board were even aware of it.

## The Dutch Supper.

The Dutch Supper on the first night gave the delegates the first opportunity to get together, as



FRANK B. JONES AND "THAT QUARTETTE."

it were. At about a quarter to six big Capt. J. W. Smith, of the River City Lumber Co., of Portsmouth, began rounding the crowd up, and soon had them in line and marched them over to the big dining hall without a hitch. There was a much larger crowd than was expected earlier in the day, and as a consequence there was hardly enough room to sit down comfortably, but the big crowd was good natured, and, without waiting for a signal, they applied themselves to the very tasty lunch without much ado.

President Jones sprung a surprise on the gather-

ing when he introduced "That Quartette," composed of the following well-known gentlemen: Frank B. Jones, F. I. Consaul, C. L. Hicks and F. A. Kuhnle. They rendered the following songs during the dinner:

The Saithers' Choir, by Parry.  
Siren Beir, by Spragin.  
Dr. Sandman, by Protheroe.  
Deep, Deep, Deep, by Shattuck.  
Spin, Spin, by Junghest.  
Solomon Levi (original).

## The Business Session.

President Frank B. Jones, of Toledo, called the meeting to order at 11 a. m. on the second day of the meeting. It was some time before the retailers could be assembled, as there were so many counter-attractions.

He did not make any extended remarks, other than to say that he regretted that there were not more of the retailers in the hall. He also took occasion to remark that no doubt the inclement weather just preceding the convention and on the first day had deterred a great many from coming.

Secretary David K. Thompson, Jr., of Columbus, read a number of communications from members who were prevented from being present for a number of reasons. The letters all praised the fine work being done by the association, and sent their best wishes for the association's continued success. A telegram was also read from the National Federation of Retail Merchants, who will hold their meeting at the La Salle Hotel, October 18 and 19. A committee of five was appointed as follows, who will attend the convention: Richard Kind, W. W. Coney, W. T. Rossiter, F. P. Childs and David K. Thompson, Jr.

Frank Hunter, of Columbus, one of the past presidents of the association and one of those who never miss a meeting, was called upon to make a few remarks. Mr. Hunter spoke of the early life of the association and how he and others had kept the fire burning until now they were a systematic, well-organized association and in a position to put into force some of the principles which the association stands for.

He said that the lien law, which the association had worked so hard for was now a reality, and it was up to the dealers to take advantage of it. Copies of the law, and also a copy of a blank form to be used, were distributed:

HOUSE BILL NO. 307.  
AN ACT

To amend Section 8324 of the General Code for the protection of mechanics, laborers and material men. Be it enacted by the General Assembly of the State of Ohio:

Section 1. That Sec. 8324 of the General Code be amended so as to read as follows:





ES AND AT THE BREAKERS HOTEL, CEDAR POINT, OHIO, DURING THE RECENT CONVENTION.

Sec. 8234. Any subcontractor, material man, laborer or mechanic, who has performed labor or furnished material, fuel, or machinery, who is performing labor or furnishing material, fuel, or machinery, or is about to perform labor, or furnish material, fuel, or machinery, for the construction, alteration, removal, or repair of any property, appurtenances or structure, described in Sections 8308 and 8316, or for the construction, improvement or repair of any turnpike, road improvement, sewer, street or other public improvement, or public building provided for in a contract between the owner or any board, officer or public authority and a principal contractor, and under a contract between such subcontractor, material man, laborer or mechanic, and a principal contractor or subcontractor, at the time of beginning to perform such labor or the delivery of the fuel or machinery, or at any time, not to exceed four months from the performance of the labor or the delivery of the machinery, fuel or material, may file with the owner, board, or officer, or the authorized clerk or agent thereof, a sworn and itemized statement of the amount and value of such labor performed, and to be performed, material, fuel or machinery furnished, containing a description of any promissory note or notes that have been given by the principal contractor or subcontractor on account of the labor, machinery or material, or any part thereof, with all credits and set-offs thereon, and proof that the sworn and itemized statement above provided for was mailed by registered letter to the address of the owner, board, or officer, shall be taken as prima facie evidence of the filing thereof with the owner, board, or officer, as herein provided.

NOTICE OF LIEN.

To....., 191..

Owner.....

You are hereby notified that in pursuance of a written oral contract between..... (principal contractor) and the undersigned, by which the undersigned was to perform labor and furnish materials for use in the construction of a certain building, contracted for between yourself and said..... as principal contractor, on your premises, to-wit: (1) Lot No. .... of ..... Addition to the city of ..... Ohio, the undersigned has furnished—is about to furnish—such labor and materials, an itemized statement of the amount and value of which and the time of furnishing the same is hereto attached, marked "Exhibit A," and made part hereof.

(2) ..... notes—of the following dates and amounts—have been executed and delivered to the undersigned on account thereof: Date..... Amount..... When due.....

The undersigned claims a lien on all payments due or to become due the said..... (principal contractor) under his said contract with you. (sub-contractor)

State of Ohio..... County, ss. .... being duly sworn, says that he is—the agent of—the owner of the foregoing claim and that the facts stated in the foregoing notice are true as he believes.

Sworn to before me and subscribed in my presence this ..... day of ..... 191.....

Notary Public..... County, Ohio

1. Describe sufficiently to identify. Location on street or street number, if lot number not obtainable.  
2. If no notes have been given insert "No" and strike out words in parenthetical clause.

NOTICE. Mail original to owner, one duplicate to contractor, by registered mail, and file one with county recorder. Attach exhibit to each copy.

Quite a number of those present cited cases of where they have already had occasion to resort to this law.

F. Lawson Moores, of Cincinnati, was one of the speakers. He urged the members to form local associations. He told them to come together at least once a month and discuss local affairs and



D. K. THOMPSON, JR., THE STRONG SECRETARY OF THE ASSOCIATION.

credits if nothing more. He said that these local meetings had resulted in much good in Cincinnati. Mr. Moores had to leave before the meeting was over to catch his train. Others who addressed the meeting were R. E. D. Ville, W. A. Fay and J. C. Neely. The meeting was a harmonious one in every respect.

After the meeting adjourned the delegates and their ladies proceeded to enjoy the beauties of Cedar Point. Many remained over Sunday. The meeting was voted one of the most profitable and enjoyable yet held by the association.

NOTES OF THE CONVENTION.

H. D. Campbell of the Peerless Coal & Supply Co., of Lima, Ohio, came up to join the association. Mr. Campbell is an old newspaper man, having been the publisher of the Morning Gazette of Lima for many years. He sold this paper last October and went into the coal business. In March he formed a partnership with W. E. Myers, who was a plaster salesman, and they then opened a builders' supply depot in connection with the coal business. They handle Medusa cement and waterproofing, Fishack plaster, general fireproofing metal lath, sewer pipe, etc. Mr. Campbell says that business has been very good with them.

One of the first men on the ground was F. P. Childs, the well-known retailer of New Lexington, Ohio. He came over to Cedar Point on Tuesday with Mrs. Childs to enjoy a vacation and incidentally took in the convention. Mr. Childs is also in the real estate business and reports business as excellent.

One familiar face that was very much missed was that of Al Gallagher, of Maumee Waterproofing fame. Business in New York kept him away and the delegates not only missed him, but also the Czarina, the handsome yacht which always accompanies Al at all the conventions at Cedar Point.

Somebody made a mistake and stepped on Ben McCausland's straw hat. He wore his cap to Cleveland and bought a soft felt hat only to have that purloined by someone in the first restaurant he entered. He is thinking of buying his hats by the dozen in the future.

James J. Hinde, of the Hinde Brick & Tile Co., had a display of his products in the lobby of the hotel. It attracted considerable attention and was the cause of several nice orders.

F. Lawson Moores, of the Moores, Coney Co., said that he and his partner have an understanding about the conventions. He always attends the state convention, while Mr. Coney's specialty is the National.

During the meeting one of the delegates incidentally remarked that he received such a quantity of booklets and other literature by mail that he had to install extra waste baskets to take care of it all.

Frank B. Jones, of the Acme Coal and Builders' Supply Co., of Toledo, is building a new warehouse.

S. M. Mossman, the prominent retailer of Huntington, W. Va., was at Cedar Point with his wife. They were enjoying a vacation and were pleased to meet the boys from Ohio.

John Jauch, of the firm of J. Rapp & Co., Columbus, O., succeeded in extracting about twice as much pleasure out of the convention as anyone else; that is because John never does anything by halves.

PRINT IN BINDING



William B. Knight, of the American Gypsum Co., of Port Clinton, and J. W. Smith, president of the River City Lumber Co., of Portsmouth, made a rather hurried departure Saturday night. They almost missed the boat telling their numerous friends and acquaintances good-bye. They visited the American mills on Sunday.

Paul Jandernal, the Lehigh's crack salesman, was resplendent in a new pair of white shoes and other things. It is rumored that Paul is in love and that may have been accountable for his preoccupied air at times.

The last we saw of Charlie O'Donnell he was sitting out on the edge of the pier watching the Eastland steam away to Cleveland. He seemed so contented that he may be there yet.

Fred Langner, of brick clamp fame, led the orchestra in the grill room and also assisted vocally. Fred was in unusually good voice.

Nobody suspected Secretary David Thompson of being a strong man. When the call was made for the delegates and ladies to assemble and have their pictures taken, one of the boys wanted to decline the honor. Dave promptly picked him up bodily and carried him over to the scene, where he was duly and properly photographed with the bunch.

The photograph shown herewith does not contain all of the delegates, as it was taken early in the morning and a few of the late risers were not up. A short film prevented a few of the boys on one end getting their handsome countenances in the picture.

Fred J. Crisp of the Akron Storage & Contracting Co., of Akron, O., is quite a comedian. He dances like Fred Stone, of Montgomery & Stone of scarecrow fame and is funnier than Richard Carle, who picked the "lemons in the garden of love." We didn't see Fred Crisp picking any lemons, however, but he was strong for the peaches.

Fred Paulson, western sales and traffic manager of the Lehigh Portland Cement Co., and his side kick, Bert Swett, had to leave the first night, much to the regret of the crowd. Fred explained it by saying that he was busy making arrangements to take care of the output of their new mill at Mason City, Iowa, which recently came into bearing.

C. S. Bigsby, of the Bigsby Manufacturing Co., of Cleveland, was a late arrival. He was busy closing a big deal on the first day and could not get away. He never misses a convention if he can possibly help it. J. L. Cooper, one of the best known cement salesmen in the business, is making good for the Lehigh in southern Ohio.

Harry S. West, of the Toledo Builders' Supply Co., is one of the most popular men in the trade. He knows everybody and everybody knows him.

#### The Attendance.

F. B. Jones, Acme Coal & Builders' Supply Co., Toledo, O.  
D. K. Thompson, Jr., Columbus Building Supply Co., Columbus, O.  
J. W. Thomson, Coshocton, O.  
G. H. Falst, Woodville Lime & Cement Co., Toledo, O.  
Harry S. West, The Toledo Builders' Supply Co., Toledo, O.  
F. I. Consaul, The Acme Co., Toledo, O.  
Chas. L. Hicks, Quartette, Toledo, O.  
F. A. Kuhnle, Quartette, Toledo, O.  
W. O. Gleeson, American Sewer Pipe Co., Akron, O.  
F. C. Rosche, Crescent Portland Cement Co., Cincinnati, O.  
O. C. Maurer, Woodville Lime & Cement Co., Toledo, O.  
A. R. Black, American Gypsum Co., Port Clinton, O.  
W. H. Kernan, American Gypsum Co., Port Clinton, O.  
B. F. Andrews, Lehigh Portland Cement Co., Chicago, Ill.  
Edw. C. Swessinger, Kelley Island Lime & T. Co., Cleveland, O.  
J. A. Taylor, McNulty Bros., Chicago, Ill.  
J. W. Smith, River City Lumber Co., Portsmouth, O.  
N. W. Battenfield, Clark & Battenfield, Delaware, O.  
C. R. Brigham, Atlas Portland Cement Co., New York, N. Y.  
B. L. Swett, Lehigh Portland Cement Co., Chicago, Ill.  
Wm. B. Knight, American Gypsum Co., Port Clinton, O.  
Chas. Schmutz, Crescent Portland Cement Co., Wampum, Pa.  
E. M. Koch, Universal Portland Cement Co., Pittsburgh, Pa.  
C. S. Lothamer, Canton, O.  
R. Thompson, Clinton, O.  
Louis B. Whitney, Alpha Portland Cement Co., Pittsburgh, Pa.  
F. P. Childs, New Lexington, O.  
L. G. Love, Crescent Portland Cement Co., New Castle, O.  
R. E. DeVille, The Ohio Builders' Supply Co., Toledo, O.  
A. A. McConnell, Ohio & Western Lime Co., Huntington, Ind.  
Wm. Wallace, American Sewer Pipe Co., Akron, O.  
Theo. H. Elwell, U. S. Gypsum Co., Cleveland, O.  
P. C. Clark, General Fireproofing Co., Youngstown, O.  
F. E. Paulson, Lehigh Portland Cement Co., Chicago, Ill.  
H. F. Rauch, Superior Portland Cement Co., Cincinnati, O.  
L. G. Powell, Roll Manufacturing Co., Cleveland, O.  
John C. Dennison, National Mortar & Supply Co., Pittsburgh, Pa.  
G. W. Richards, American Gypsum Co., Pittsburgh, Pa.  
B. Scott, McFarland, Economy, Pa.  
G. R. Hackney, Newark Art Stone & Plaster Co., Newark, O.  
H. E. Kendrick, Delavan, O.

Charles F. O'Donnell, Buckeye Portland Cement Co., Bellefontaine, O.  
C. A. Ducus, John D. Ducus & Son, Owens, O.  
Frank Hunter, F. H. Hunter & Sons, Columbus, O.  
John Jauch, J. Rapp & Co., Columbus, O.  
Jas. J. Hinde, Hinde Brick & Tile Co., Sandusky, O.  
J. P. McCaffrey, North Yacuma, Wash.  
F. G. Munz, Buckeye Builders' Supply Co., Toledo, O.  
J. D. Runsey, Stryker Builders' Supply Co., Stryker, O.  
F. J. Penney, D. J. Penney Co., Lorain, O.  
E. Huber, U. S. Gypsum Co., Toledo, O.  
E. G. Peffer, Crooksville, O.  
J. J. Urschel, Woodville Lime & Cement Co., Toledo, O.  
E. L. Abbott, Columbus, O.  
Frederick Baird, Cleveland, O.  
F. W. Ohlemacher, The Kelley Island L. & T. Co., Sandusky, O.  
B. W. McCausland, Jr., U. S. Gypsum Co., Cleveland, O.  
O. F. Ferriman, Forrester Plaster Co., Cleveland, O.  
H. F. Rowe, Robinson Clay Products Co., Akron, O.  
J. C. Neely, Neely & Ferrall, Canton, O.  
W. F. Powell, Atlas Portland Cement Co., New York, N. Y.  
Henry Angel, Cleveland Builders' Supply Co., Cleveland, O.  
O. H. List, Kelley Island Lime Transfer Co., Cleveland, O.  
E. C. Van Epps, American Gypsum Co., Cleveland, O.  
C. F. Harwood, Superior Portland Cement Co., Cincinnati, O.  
J. Q. Adams, Coshocton Lumber Co., Coshocton, O.  
W. W. Fishack, The Fishack Gypsum Co., Toledo, O.  
E. H. Fishack, The Fishack Gypsum Co., Toledo, O.  
C. E. Klotz, The Fishack Gypsum Co., Toledo, O.  
E. G. Wagner, Mt. Gilead, O.  
A. J. Clementz, Massillon, O.  
E. W. Riegle, American Gypsum Co., Portsmouth, O.  
George J. Klamme, Kelley Island L. & T. Co., Cleveland, O.  
Joseph F. DeRau, Stull Bros., Freemont, O.  
J. Claude Stull, Stull Bros., Freemont, O.  
Frank W. Stull, Stull Bros., Freemont, O.  
A. P. Lagron, Lorain, O.  
S. W. Cornelius, Indianapolis, Ind.  
R. Dungan, Indianapolis, Ind.  
Paul A. Jandernal, Lehigh Portland Cement Co., Chicago, Ill.  
G. H. Uthoff, The Woodville Lime & Cement Co., Toledo, O.  
H. D. Campbell, Peerless Coal & Supply Co., Lima, O.  
F. Lawson Moores, Moores, Coney Co., Cincinnati, O.  
J. R. Paul, Ironport Portland Cement Co., Ironport, O.  
C. S. Bigsby, Bigsby Manufacturing Co., Cleveland, O.  
F. A. Voegel, Voegel Bros., Mansfield, O.  
D. L. Holst, W. O. Holst B. S. Co., Toledo, O.  
D. L. Jenkins, General Fireproofing Co., Youngstown, O.  
Fred J. Crisp, The Akron Storage & Contracting Co., Akron, O.  
H. C. Milott, Hinde Brick & Tile Co., Sandusky, O.  
W. F. Rosstter, Cleveland Builders' Supply Co., Cleveland, O.  
J. S. King, Cleveland Builders' Supply Co., Cleveland, O.  
A. Y. Gowen, Lehigh Portland Cement Co., Chicago, Ill.  
J. S. Barnett, J. S. Barnett & Co., New Comerstown, O.

#### The Ladies.

Mrs. O. C. Maurer, Toledo, O.  
Mrs. J. W. Thomson, Coshocton, O.  
Mrs. F. P. Childs, New Lexington, O.  
Mrs. Arthur R. Black, Port Clinton, O.  
Mrs. E. M. Koch, Sandusky, O.  
Mrs. Charles Schmutz, Youngstown, O.  
Mrs. S. C. Rosche, Cincinnati, O.  
Mrs. Charles Hicks, Toledo, O.  
Mrs. F. A. Kuhnle, Toledo, O.  
Mrs. F. I. Consaul, Toledo, O.  
Mrs. F. B. Jones, Toledo, O.  
Mrs. C. R. Brigham, Toledo, O.  
Mrs. W. F. Powell, New York.  
Mrs. George J. Klamme, Cleveland, O.  
Mrs. E. C. Van Epps, Cleveland, O.  
Mrs. O. H. List, Massillon, O.  
Mrs. E. D. Cornelius, Indianapolis, Ind.  
Mrs. R. Dungan, Indianapolis, Ind.  
Mrs. Stewart, Indianapolis, Ind.  
Mrs. F. G. Munz, Toledo, O.  
Mrs. F. A. Voegel, Mansfield, O.  
Mrs. W. O. Holst, Toledo, O.  
Miss Bessie L. Jones, Mansfield, O.  
Mrs. J. S. Barnett, New Comerstown, O.

#### Trade Press.

William A. McCall, Dealers' Record, Chicago.  
B. F. Lippold, Rock Products, Chicago.

#### PITTSBURGH RETAILERS.

Pittsburgh, Pa., Sept. 18.—Business has kept up and in fact increased in some lines. Fine weather has prevailed most of the time for the past month. Except for a few heavy rains street work has gone on steadily and rapidly. In the city the bulk of business done has been even larger than during the earlier summer months owing to the big jobs now under way. A large amount of letting was also done in the suburbs. This, of course, is nearly at an end now, and there will be comparatively little county work, except bridges, coming up for bids after the 20th of this month.

In builders' supplies, dealers report a steady gain in business at all points. It has not been large but was enough to show that fall building is on a somewhat larger scale than was at first expected. Local firms have been doing well and in general are feeling better about business and the outlook than they did a month ago. Business conditions in Pittsburgh as a whole are decidedly better.

The features in the new commission form of government, together with the pretty thorough political house cleaning that is now going on, the appointment recently of a municipal industrial commission of the finest business men in the city for

the express purpose of booming Pittsburgh and the practical certainty that millions of dollars will be spent for municipal improvements and big building projects during the next eighteen months, are all having a splendid effect upon general trade conditions.

Knox, Strouss & Bragdon report a very fair trade. Building and sidewalk materials seem to lead at present in demand. This concern is working a full quota of teams and this month has a very nice business in plaster and cement.

Building operations are beginning to look up around the city. Two lots of forty houses each were recently arranged for building in the high class Squirrel Hill district. This week the Thorniley Realty Company is arranging to build forty-two houses in the Friendship Park district of the East End. Other smaller but similar lots are being put into the hands of bidders and contractors and it looks as if a very fair amount of letting would be done before snow flies.

The commissioners of Allegheny County have let some large road contracts lately, among them being the following: Ridge Bros. Company, the Friday road, \$19,248; McLaughlin Contracting Company, the Ben Avon and Lowries' Run road, \$43,920; Henry Hileman, the Glass Run road, \$45,764; J. W. Butler, the Buena Vista and Lovedale road, \$64,573. McLaughlin & Heagen also secured the contract for the No. 1 Oakwood Run bridge, to cost \$24,791.

Houston Bros. Company say that general business with them is fair to good, although in some lines it is slowing down a little the past week, as is expected at this season. Their lime plant is running full and also their brick plants and general trade has been probably considerable ahead of last year.

One of the recent visitors to Pittsburgh was Keith Compton, of the Paving Commission of Baltimore, Md., who spent several days here examining Pittsburgh methods of street paving, in company with N. S. Sprague, the superintendent of the local Bureau of Construction. He is making a study of the methods of track construction used by the Pittsburgh Railways Company in as much as Baltimore now has \$5,000,000 available for paving and repaving and wants to get 100 cents out of every dollar.

One of the largest jobs which will be certainly undertaken next spring, if not before, will be the abolishing of grade crossings by the Pennsylvania Railroad Company in Wilkinsburg and also Oakmont and East End suburbs. Wilkinsburg councils are now trying to get together with the railroad company and whether an agreement is reached or not there is soon to be started work which will cost \$2,000,000 or more. In Oakmont the railroad company is planning to spend \$250,000 within a comparatively few months.

The biggest job of street work ever undertaken on a business street of Pittsburgh is the raising of Federal street, north side, of which the general contract was awarded to Booth & Flinn, Ltd. The street, from the Fort Wayne station to the Allegheny river, is being raised from six to eight feet to get it out of danger of floods. On either side buildings are being elevated to the new level and a more distressing place for business men to do business could hardly be found than this street for the past two months.

Pittsburgh councils are trying to find out if the claim of Mayor William A. Magee, who says he has \$800,000 available in the city treasury for the removal of the famous hump, is really so.

Recently the Pittsburgh Chamber of Commerce business and professional men to make a thorough appointed a special committee of seven well-known survey of the city. The idea is to find out just what is the matter with Pittsburgh—to work together with the newly appointed industrial commission in sound and energetic efforts to bring Pittsburgh back. The Industrial Commission was appointed the day before and its members are Robert Garland, D. P. Black, F. F. Nicola, J. C. Chaplin, Maurice Baer, A. M. Schoyer, H. P. Bope, Robert Finney, W. C. Coffin, William H. Donner, James F. Keenan and Col. J. M. Schoonmaker. One of the first problems which the two commissioners will look after will be the proposed building of a subway to the East End.

The Allegheny County Light Company will spend over \$200,000 this fall in laying its wires underground.

The Monongahela Railroad Company has let to McMinim & Symmes, of Philadelphia, the contract for grading its entire line from Martin, Pa., to the West Virginia state line.

W. H. Oliver, Jr., purchasing agent of the Philips Sheet & Tin Plate Company, of Weirton, W. Va., has resigned that position and is organizing a supply company to be located in Pittsburgh and to deal in brick, glass house and factory supplies.

## BUFFALO RETAILERS.

Buffalo, N. Y., Sept. 15.—There are seven large firms in this city which supply Buffalo with all the builders' supplies required in its building operations. A number of these firms have grown up with the city and those established in recent years are all conducted by men who are abreast of the times, full of push and energy and operate large and up to date yards and plants. Building operations this year have not quite come up to the mark of last year, but the prospects for the coming fall are full of encouragement. Among the new buildings projected early last spring, foundations are now being dug for the General Electric building at the corner of Washington and Huron streets, seventeen stories in height, and when completed will be the tallest building in Buffalo; and foundations are now being sunk for the New York Telephone building at the corner of Franklin and Church streets, which when completed will rise to a height of fifteen stories. These buildings will be fireproof, constructed of brick, stone and concrete floors.

M. A. Reeb has handled builders' supplies in Buffalo for the last quarter of a century, opening his first warehouse and yard on the corner opposite to where his main offices at 597-599 Michigan street are at present located. He operates four yards; one at River street and the Grand Trunk Railway tracks; one at West Delavan avenue and one at French street, both on the New York Central lines; the fourth at 599 Michigan street, which helps out the trade he calls the accommodation yard. At his West Delavan avenue location, the up to date plaster mill is located, manufacturing the well-known "Peerless" plaster, which has been on the market for over fifteen years. Its sale extends as far east as the New England states, into Pennsylvania, Virginia, and north into Canada. It has become popular with the trade by reason of its strength, uniformity and light color, the large covering and sand carrying capacity and its easy working quality. This plaster mill uses a sand drier made by the Atlas Drier Company, of Cleveland, which dries ten tons of sand an hour, and is believed to be the only drier of that capacity used in any mill in the state of New York. This yard uses a big clam shell for unloading sand, of which large quantities are used in the manufacture of plaster and it was said two years ago that at one time more sand was stored here than any sand company had in Buffalo. The entire length of one side of this yard borders on the old Erie canal, which is now being dredged and deepened to permit lake steamers passing through, while the entire length of the other side, over 600 feet, has a frontage on the tracks of the New York Central Belt Lines. This gives the yard particularly advantageous facilities of transfer of shipments from rail to water and the reverse. The River street yard on the Grand Trunk Railway tracks takes care of the downtown trade; the French street warehouse takes care of the East Buffalo trade, and the West Delavan avenue location is used as the distributing point for the "Black Rock" trade, the oldest district within the corporation limits of Buffalo. The combined storage capacity of the warehouses in these various yards when reduced to barrels, figures up to something enormous in quantity of cement, plaster and lime. The arrangement of driveways in these yards is admirable in point of handling all material economically and insuring prompt deliveries. All orders for delivery of material are sent to the main office. One clerk here, attending solely to the incoming orders, by a simple yet perfect system which in this office has been in use now for two years, knows exactly what each team is doing and where it is going, phones the order where teams are least busy, effecting deliveries to jobs in the least possible time. The average haul from these yards to jobs by reason of their location has been reduced to less than two miles. Many head of horses are stabled in barns of up to date construction. He handles Lehigh, Universal and Crescent Portland cements, the "Peerless" plaster, lime, sewer pipe, sand, gravel, with a full and large line of masons and builders' supplies. At his plant in Paterson, N. J., he manufactures the widely known "Peerless" plaster board; is president, treasurer and manager of the Niagara Gypsum Company, of Oakfield, N. Y., operating an electrically equipped mill whose capacity is 500 tons of plaster daily, and is president of the Niagara Falls Builders' Supply Company. Henry Schaefer, Jr., is his assistant in the management of the builders' supplies business at Buffalo.

Among the big and progressive firms in Buffalo handling builders' supplies is the comparatively new concern, the Buffalo Builders' Supply Company, established two years ago with general offices on the ninth floor in the great office structure

known as "Ellicott Square." It operates four warehouses and yards located in various parts of the city with the view of minimizing length of hauls of material to jobs throughout the city, which by the advantageous location of its yards have been reduced to an average of two miles. One of their warehouses with a storage capacity of 15,000 barrels of cement, not including plaster, lime and other builders' supplies, is located on the docks at Ohio street and the tracks of the Delaware, Lackawanna & Western Railroad, an excellent lake point. This warehouse takes care of downtown deliveries. The yard of Genesee street and the Belt Line occupies ground space of practically half a block; the yard at Grote street and the tracks of the New York Central lines and the yard at West Seneca and the Pennsylvania Railroad tracks occupies the same area of ground, all equipped and stocked in an admirable manner and with a full and complete line of builders' supplies.

Each of these yards has two switch tracks from the respective railway lines they are located on, giving each the best transportation facilities that can be procured; while the lake and canal facilities enjoyed at its marine warehouses are of the greatest advantage. The warehouses in these yards are of modern up-to-date construction with solid concrete floors, permitting cement to be packed to the ceiling if necessary without endangering the structure by the enormous weight. The combined storage capacity of these warehouses is indeed very great. The arrangement of the driveways was perfected with the sole view of economy in handling material and making prompt deliveries and to reduce hauling charges to a minimum. It owns thirty head of horses and fifteen teams used in



M. A. REEB, BUFFALO, N. Y.

handling material, but it frequently has been found, in busy times, necessary to hire as many more. The barns in the yards can each stable fifteen horses and when found needful are shifted where they are most required. The company handles exclusively, Atlas Portland cement, United States Gypsum Company's plaster, Kelley Island Lime & Transport Company's lime in bulk and hydrate, sewer pipe from most of the leading sewer pipe manufacturers, sand, gravel, crushed rock, common and pressed brick and every line that pertains to builders' supplies. The main offices in Ellicott Square are perhaps the most unique occupied by any firm in the country handling builders' supplies. The scheme followed and executed admirably is that of a pergola with cottage garden wall of brick, coping and ornamental vases on a wall of terra cotta made by the Northwestern Terra Cotta Company, forms the partition dividing the working force from the main office. A brick rack in the form of a pergola extends the entire length of the side opposite the garden wall. The bricks rest on hidden angle irons instead of wooden shelves. From stars placed in the ceiling a diffused and soft light is shed through the interior. Esenwein & Johnson, the famous hotel architects, designed the interior of these remarkably unique business quarters of this company. Another unique feature of this concern is its snow white painted delivery wagons with olive green letters, making them very conspicuous wherever they appear on the streets of Buffalo. Its officers are: S. M. Hamilton, president and treasurer; Benjamin Luce, vice

president, and C. L. Hayes, secretary. W. L. Markham is chairman of the board of directors.

The main offices of the Buffalo Paragon Wall Plaster Company are located at 502 and 504 Michigan street. The yard at this location, which was opened last March, occupies 65x150 feet of ground, everything on it and about it is brand new and up-to-date. It is compact and admirably arranged for handling builders' supplies economically and delivering material to jobs promptly and is intended strictly to take care of its city trade. Its warehouse, 25'x140', is of brick construction, with solid concrete floors which will bear the weight of cement piled to the ceiling if necessary, holding easily 2,000 barrels of cement, lime and plaster. The barn near the warehouse is built of brick, modern in every detail and stables the houses owned by the company. Two singles and three double teams are used for hauling material. The mill, which manufactures the "Paragon" wall plaster, is located at 11 Breckenridge street, the tracks of the New York Central lines and the Erie canal. Its sales extend through New York and Pennsylvania. The sand used in the manufacture of "Paragon" plaster in this mill is dried by steam, which this company claims makes live plaster and causes it to work much easier than by the direct heat process. This plant of which the mill is part, is located at the foot of Breckenridge street, has a frontage of 275 feet on the Erie canal, a track frontage of 215 feet on the New York Central lines, with two switch tracks of 215 feet in length running alongside of warehouse and yard. The storage capacity of this warehouse is estimated at over 2,500 barrels of cement, plaster and lime. The ground space occupied in this yard is 100'x275'. Its barn stables twelve horses and the yard supplies the trade with builders' supplies in what is known as the "Black Rock" district of Buffalo. The company handles exclusively Alpha Portland cement, lime in bulk from the Ohio & Western Lime Company, and both bulk lime and hydrate from the Kelley Island Lime & Transport Company and the National Mortar & Supply Company, of Gibsonburg, Ohio; sewer pipe of the Evans Clay Products Company and a large and full line of masons' supplies.

The company was established in Buffalo in 1894. Its officers are: Thomas C. Burke, president; George H. Harrower, vice president, and F. L. Lane, secretary and treasurer. Secretary Lane reported trade fine since June and expressed the belief that prospects for fall trade are bright.

John Lyth lays claim to being the inventor of hollow tile and the oldest manufacturer of this product in New York state. He founded the business of the firm of A. Lyth & Sons Company in 1857. Its main offices are at 48 West Eagle street. It operates three builders' supplies yards at 202 Oak street, Hamburg and Scott streets, the North Buffalo yard, which has switch tracks running into it from the Lake Shore road and the Buffalo & Susquehanna railway, and at Northland avenue and New York Central tracks. The ground space occupied by each of these yards is approximately 150'x300'. Its warehouses are large, of modern construction and their combined storage capacity is estimated at approximately 20,000 barrels of cement, lime and plaster. The Oak street yard supplies the city trade. The barn in the Northland avenue yard stables seventeen head of horses, which with the single and double teams are employed in hauling material to jobs in all parts of Buffalo. The company handles Lehigh and Newcastle Portland cements, King's Windsor plaster, Kelley Island Lime & Transport Company's lime in bulk and hydrate, sewer pipe of the American Sewer Pipe Company and a full line of all builders' supplies. The officers of the company are: Alfred Lyth, president; Byron F. Lyth, vice president; Alfred L. Lyth, treasurer, and J. H. Caudell, secretary. Both John Lyth and Alfred Lyth have been president of the Buffalo Builders' Exchange and Alfred Lyth is the present treasurer of the exchange. Business was reported good this year and prospects were believed to be encouraging for the fall trade.

J. H. Ross is the pioneer in handling builders' supplies in Buffalo. He has been in business since 1866. His main office is at 141 Erie street. He has probably the best constructed concrete warehouse in the city. It is 60'x100' and located at the foot of West Genesee street, the New York Central railroad tracks and the Erie canal, giving him the best of facilities for rail and water transportation. His carting facilities are unequalled in Buffalo, which insure prompt deliveries of material to jobs in all parts of the city. He has the agency for J. B. King & Co.'s plaster products and operates a mixing plant which has an output of thirty tons of King's Windsor plaster a day. Mr. Ross handles Lehigh and Lawrence Portland cements,





YARD OF A. LYTH &amp; SONS COMPANY, BUFFALO, N. Y.

King's Windsor plaster, the Kelley Island Lime & Transport Company's hydrate and lime in bulk with a full and large line of masons' supplies. He reports business not satisfactory this year.

The Bray & Lukens Company was established nearly a quarter of a century ago and are doing a large business handling builders' supplies. It operates three yards, one at 216 Ellicott street, where also the main offices of the company are located, one at Tonawanda and Niagara streets, which has a switch track running into it from the New York Central lines and accommodates three freight cars, and the third at 607-625 Smith street, with switch track from the Pennsylvania Railroad lines. The storage capacity of the warehouses in these yards each is fully 2,000 barrels of cement, lime and plaster. It owns sixteen head of horses, four teams and eight singles which are employed in hauling material to jobs in various parts of Buffalo. The company handles Penn Allen, Vulcanite and Universal Portland cements; its own brand of plaster, the "Frontier," which is very popular locally; lime in bulk and hydrate of the Kelley Island Lime & Transport Company, sewer pipe, flue lining, fire brick, wall coping and everything in masons' supplies. Mr. Bray reported business good since June, with encouraging prospects for fall.

F. A. Keith recently acquired the controlling interest in the Globe Plaster Company. It was established some seven years ago. Its offices are in the Builders' Exchange. Its mill is at Howard and Stetson streets, with a switch from the New York Central Railroad tracks. The capacity of the mill is fifty tons of plaster a day. The "Globe" is a high grade plaster, popular, and its sales chiefly local. The company handles a full and complete line of builders' supplies.

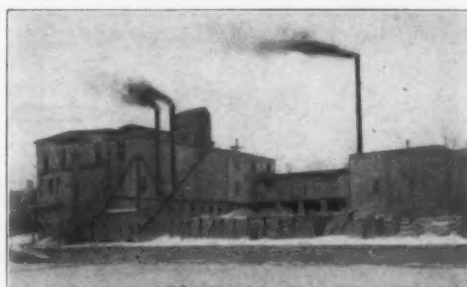
#### ROCHESTER RETAILERS.

Rochester, N. Y., Sept. 11.—An increase of over one hundred per cent in population was recorded by the last census report for Rochester. Officially it has a little over 210,000 population, but in fact the city has nearer 300,000 if the suburbs were counted in. These suburbs are practically solidly built up to the city limits, and it is only the imaginary city line which throws this population of about 90,000 out of the census count. Business is flourishing in Rochester; everybody here is a hustler, and especially so the men handling builders' supplies. They operate large and modern yards, handle immense quantities of building material and report great activity in building lines this fall.

The men handling builders' supplies in the towns between here and Buffalo operate large modern yards and possess much the same spirit of "get up and go" as their Rochester brethren. They all anticipate heavy trade this fall.

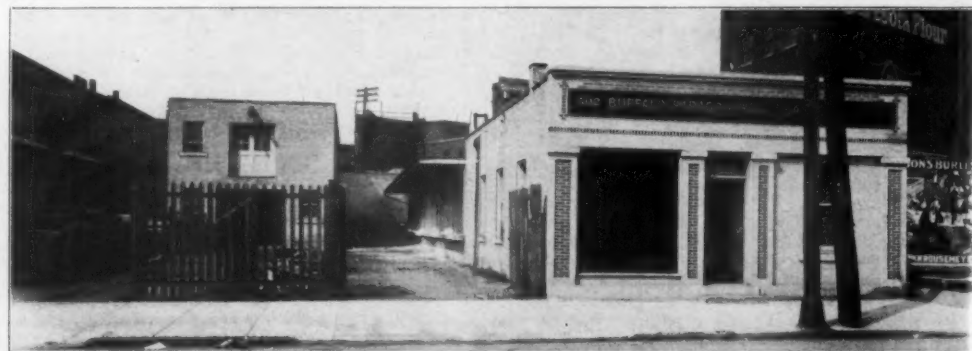
In every way J. J. Mandery's yard at 1175 East Main street, Rochester, is the model yard of this country. It is one of the best equipped and best arranged for handling and promptly delivering building material. It covers four acres of ground and the various materials in it, whether under cover or piled in the open, line the five broad driveways from which teams and motor trucks are loaded. To

further facilitate quick handling of material it has portable tracks which are laid from the switch tracks from the New York Central lines running into the yard, to any part of it where it is to be stored, on which little platform cars are run. A driveway and switch track runs between the two great warehouses at the eastern boundary, which have a storage capacity of 35,000 barrels of cement, plaster and other material. These warehouses are of modern construction, with solid concrete floors. The east warehouse, called so because of it standing on the east side of the switch track, is 300 feet long and 50 feet wide and the west warehouse is 400



PLANT OF THE BUFFALO PARAGON WALL PLASTER CO., BUFFALO, N. Y.

feet long and 30 feet wide. The broad driveway which runs in the rear of the office building where the scales are placed, skirts the garage, the sheds where large quantities of brick and sand are stored, and the stable. All these buildings are kept in splendid repair and from their appearance must receive a fresh coat of paint in the spring every year. A concrete sidewalk lines the driveway from the office building to the brick sheds. These sheds, including the barn, which is a part of them, are 140 feet in length. Near the sheds stands the tenant house, a pretty two-story structure, the home for the yard master. The switch tracks from the New York Central lines accommodate 20 freight cars and run alongside of warehouses and brick sheds. The



OFFICE AND PLANT OF BUFFALO PARAGON WALL PLASTER CO., BUFFALO, N. Y.

barn stables 5 head of horses and the garage houses 4 three-ton Packard motor trucks which have displaced 12 teams in hauling material to jobs in the city. A separate telephone system has been installed for yard service, enabling the office to reach any part of it without delay. The office building, one story in height, of brick construction, is unique in its architectural lines and conspicuous in its beauty. The interior, where the immense business of the firm is conducted, is rich in its appointments, its elegance heightened by its simplicity. The counters and walls are of polished marble and the floor laid in mosaic tile. The reception room, part of the office, is furnished with elegant mahogany furniture—big easy and comfortable chairs, writing table, etc.

J. J. Mandery's trade extends south to the Pennsylvania line, north to the lake shore, west half way to Buffalo and half way to Syracuse on the east. He handles Universal, Edison and Alsens Portland cements at the present time; Mandery's "Perfect Wall Plaster," made in Oakfield, N. Y.; Kelley Island Lime & Transport Company's and F. W. Wait & Co.'s, Glens Falls, N. Y., lime in barrels; Mandery's "Perfect" hydrate of lime, greatly used for spraying; F. W. Wait & Co.'s "Jointa" lime for spraying; Rockaway coarse and fine sands; high grade pressed and ornamental brick; sewer pipe, flue lining and wall coping from the New York State Sewer Pipe Company, of Rochester, including the products of the Akron, Ohio, manufacturers; metal lath of the Consolidated Expanded Metal Company, of Pittsburgh, Pa., and the Youngstown Iron & Steel Company, of Ohio; wood lath whose sales reached four millions last year; waterproofing compounds and cement paints of Toch Brothers, New York, and Edison's waterproofing compounds made by the North Jersey Paint Company; fireproofing hollow blocks made by the Whitaker Company, of Waynesburg, Ohio; Best Bros.' Keene's cement and Coronet brand of imported Keene's cement; Blanc Stainless Portland cement; high grade fire brick and fire clay of the Bickford Fire Brick Company, of Kewinsville, Pa., and the Queen's Run Fire Brick Company, of Lockhaven, Pa.; drain tile of the Akron Vitritified Clay Manufacturing Company, Ohio; mortar colors and Sackett's plaster board of the Clinton Metallic Paint Company, New York, and the United States Gypsum Company; plaster of Paris of Witherspoon, New York city, J. B. King & Co. and the Keystone Plaster Company, of Pittsburgh, and Lally concrete filled columns of the United States Column Company, of Cambridge, Mass.

L. J. Shelmire, manager of the firm, stated that business was good this year and that they were rushed with filling orders for material the last four weeks. He said: Prospects are bright for this fall, much better than last year."

It is as curious as it is an interesting story to hear Charles E. Harris, president of the Harris Plaster Company, of Rochester, N. Y., tell how he got into manufacturing plaster and operating one of the prominent builders' supply yards in this city. Here is the story as he tells it himself: "Eight years ago I was a carpenter in Bellows Falls, Vt. One day I picked up Rock Products I think that was the paper, because nearly all the people handling builders' supplies around there read this paper. I don't know what made me look over its pages containing advertisements, for I had always been averse to looking at 'ads,' but I did. I saw the announcement of the Napoleon Pulp Plaster Company, of Napoleon, Ohio, making its 'Elastic Pulp Plaster.' I sent for a sample bag of this plaster, which turned out so well that in a short period I had it shipped from Napoleon to Bellows Falls in carload lots. I believe I was the first man in Vermont who had the first carload of plaster shipped into New England. At any rate this was the beginning of my getting into the plaster trade,

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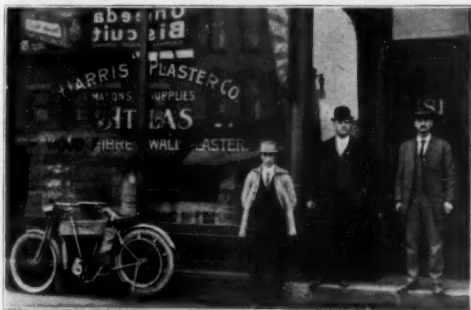
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which resulted in the establishment of plaster mills at Hartford, Conn., Bellows Falls, Vt., and Binghamton and Rochester, N. Y. I was for a time the manager of and helped install the machinery in the last three plaster mills. It has always been a mystery to me whether it was foreordained when I picked up this paper that I should look over its advertisements, to which I had always been adverse before that time. Was it merely an accident that the announcement made such an impression as to send for a sample bag of its plaster? That, however, was how I got into the business I have been conducting successfully for eight years."

The Harris Plaster Company's yard and office is located at 181 Main street West, Rochester, N. Y. It was established three years ago and incorporated in 1909. Charles E. Harris is president and H. A. Meech secretary. The yard and warehouse are located on the Erie canal and possess excellent shipping facilities, the storage capacity being upwards of 4,000 barrels of cement, lime and plaster. A driveway runs from Main street and an alley through the warehouse which has solidly constructed concrete floors. The arrangement of yard is perfect for handling economically and delivering promptly material to jobs in all parts of the city. The company handles Universal and Crescent Portland cements; its own plaster, manufactured under the president's special formula known as "Atlas Wood Fibre Wall Plaster." This plaster has a local sale in Rochester and a large sale in the New England States, where Harris' name is specially well known throughout all the towns there; hydrate of the Woodville Lime & Cement Company, Toledo; metal lath of the Northwestern Expanded Metal Company of Chicago, known as the "Kno-Burn Steel Lath"; asbestos "Century Shingles," manufactured by the Keasbey & Mattison Company of Ambler, Pa., and a full line of masons' supplies. Mr. Harris said that the demand for hydrate is increasing rapidly and promises in the near future to be the lime used for all work in



OFFICE OF HARRIS PLASTER COMPANY, ROCHESTER, N. Y.

Rochester. He reports business prospects for fall very bright.

The Rochester Lime Company has its general offices at 209 Main street W. It was founded by F. C. Lauer, Sr., in 1874, the grandfather of the present officers of the company. F. C. Lauer, Jr., succeeded him as president until his death. The present officers of the company are: W. F. Lauer, vice-president, and G. W. Lauer, manager and treasurer. It operates four yards centrally located in Rochester for the distribution of building material to jobs in all parts of the city. The yard on Main street is on the banks of the Erie canal, and also the one at Averil avenue. One is located on the tracks of the Lehigh Valley railroad and the fourth at Colvin street and the New York Central lines. The last two yards have switch tracks running into them from the respective roads, each accommodating three freight cars. The rail and water shipping facilities of this company are excellent. It operates three lime kilns at East avenue in Brighton, a suburb of Rochester. The output of these lime kilns is 50,000 bushels of lime annually. The storage capacity of its warehouses is approximately 3,000 barrels of cement. The barn stables 30 head of horses and it uses 16 teams in busy times to haul material to jobs within the city limits. The arrangement of their yards for handling material economically and making prompt deliveries is admirable. In these yards are handled Alpha Portland Cement; M. A. Reeb's Niagara Wall Plaster; hydrate of the National Mortar & Supply Company, Gibsonburg, O.; the product of the New York State Sewer Pipe Co., of Rochester; metal lath from the Bostwick Steel Lath Company, Niles, O.; American Rolling Mill Company and General Fire Proofing Company, both of Youngstown, O.; flue lining, fire brick, fire clay of the Elk Fire Brick



OFFICE OF JOS. J. MANDERY, ROCHESTER, N. Y.

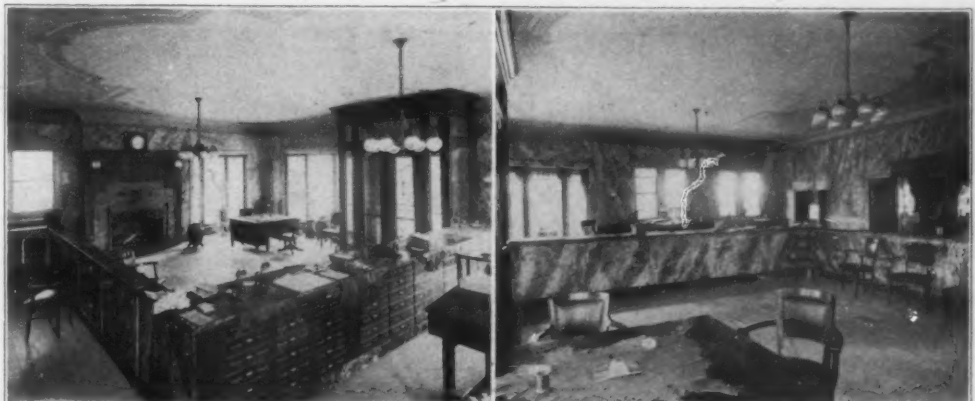
Company, St. Mary's, Pa.; plaster of Paris from J. B. King & Co., and Sackett wall board of the United States Gypsum Company bought through the Sampson Plaster Board Company, and dynamite of the Dupont Powder Co., New Jersey. G. W. Lauer reported business rather off the last two months, but is commencing now to show great activity and for the last three weeks were rushed to supply the demand for building material.

The New York State Sewer Pipe Company has its main offices in the German Insurance Building on the eighth floor. It operates two factories in Rochester which manufacture sewer pipe, flue lining, vitrified conduits, drain tile, floor tile and paving brick. It is the sole selling agent for Universal Portland Cement, and also for the "Dragon" and "Paragon" manufactured by the Lawrence Cement Company, of Pennsylvania. It also deals in Atlas Portland Cement and its white cements. In addition to its factories it has three distributing yards here with railroad and water shipping facilities on the New York Central lines, Buffalo, Rochester & Pittsburgh railroad and Erie canal. Its three yards cover 26 acres of ground, and the storage capacity of its warehouses is over 10,000 barrels of cement. The sales of cement of this company will this year run up to 100,000 barrels in Rochester alone. The company's sewer pipe in Rochester is distributed by J. J. Mandery, the Thomas Oliver Estate and Whitmore, Rauber & Viscinius. The production of clay products of its Rochester factories is in round numbers 1,500 carloads annually. In addition this the company buys and sells considerable sewer pipe and drain tile made in the Akron (Ohio) district, also from St. Mary's, Pa. This company has a quarter of a million of dollars invested and does a business of \$400,000.00 a year. Its officers are: Edward W. Peck, president; Richard Gorsline, vice-president; William H. Gorsline, treasurer, and J. E. Maher, secretary.

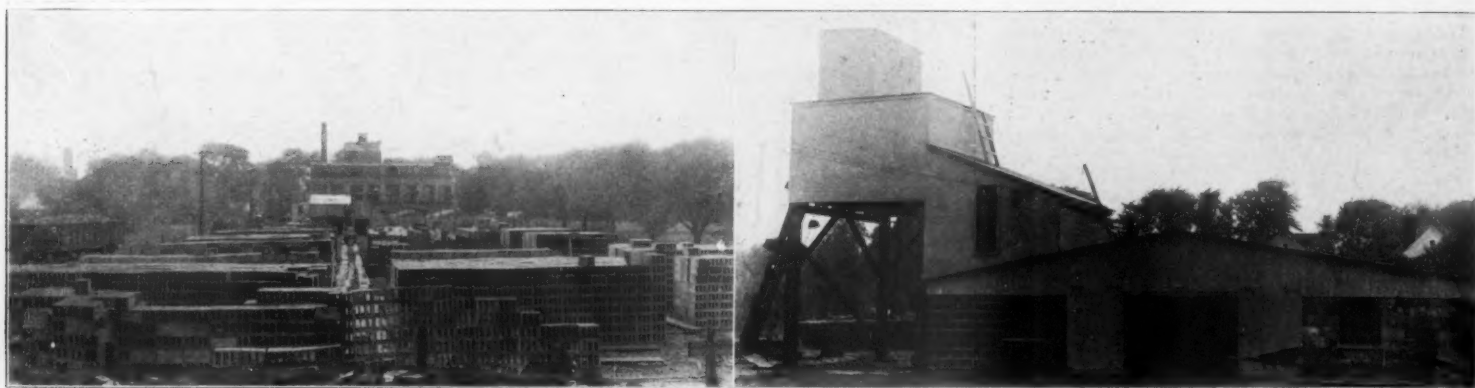
Grey & Jones' office and yard is located at 770 Exchange street. They started in business the fifteenth of October, last year. Herbert D. Grey and Thatcher K. Jones are live young business men of ability, have been actively connected with the trade for the past eight years and are well known throughout New York and New England. They are swinging a big line of builders material. Their yard fronts 300 feet on the Erie Railroad and 600

feet on the Pennsylvania Lines and has switch tracks from these roads running into the yard accommodating ten freight cars. Their warehouse, built of "Norristone" blocks, has solid concrete floors, and the office building of the same material, one story in height, is very pretty in appearance. The warehouse has a storage capacity of 2,500 barrels of cement, plaster and other material. The yard is arranged admirably for economically handling and promptly delivering material to jobs in the city. They handle cements of the Atlas and Coplay Portland Cement companies, and the Paragon Portland Cement of the Lawrence Cement Company, the Garbutt Gypsum Company's brand "Samson Plaster"; Quaker hydrated lime and Quaker plaster of Paris bought from Thomas Robinson & Company, of Philadelphia, Pa.; they are distributors for the Garbutt Gypsum Company's plaster; they handle sewer pipe, flue lining, wall coping from the New York State Sewer Pipe Company, Rochester; metal lath of the Northwestern Expanded Metal Company, Chicago, its famous "Kno-Burn Steel Lath" brand; Imperial Corner Bead of Thomas Robinson & Co.; sand and gravel from the Elam Sand Co., Rochester; fire proofing hollow building tile from St. Mary's Fire Proofing Company, and all kinds of pressed brick, bought through G. H. Swan, of Rochester, and "Norristone" blocks for buildings, manufactured by J. Frank Norris, of Rochester. Mr. Grey reports business very active for the past three months with exceedingly promising prospects this fall.

Horace T. Oliver, manager of the Estate of Thomas Oliver, main office at 328 South avenue, operates two builders' material yards. The business was established a quarter of a century ago. The yard at Averil and Clinton avenues south, is on the Erie canal, as well as the South avenue yard. The warehouse is on the Lehigh Valley railroad, and the total storage capacity is upwards of 10,000 barrels of cement plaster and other material. He handles Lehigh Portland Cement and the Giant brand of the American Cement Company; United States Gypsum Co.'s plaster made at Oakfield, N. Y.; lime in bulk of the Ohio & Western Lime Company and hydrate of lime from the National Mortar & Supply Co., of Gibsonburg, O.; sewer pipe, flue lining, wall coping, etc., of the New York State Sewer Pipe Company; metal lath of



INTERIOR VIEWS OF JOS. J. MANDERY'S OFFICE, ROCHESTER, N. Y.



WHITMORE, RAUBER &amp; VICINIUS CEMENT TILE AND BLOCK PLANT, AT ROCHESTER, N. Y.

the Bostwick Metal Lath Company, Niles, O.; mortar colors of the Jamestown Paint & Varnish Company, Pa., with a complete line of masons' supplies. Horace T. Oliver is one of the large and successful contractors in Rochester. He reported business only ordinary this year, so far.

The Rochester Composite Brick Company, of which Homer Knapp is president, Rawley W. Holden, secretary and treasurer, and W. M. Barchfield is sales manager, has its offices at 64 Clinton avenue, North. Its brick and cement block plants are located at Brighton, a suburb of Rochester, N. Y. Its brick factory turns out large quantities of fine sand-lime brick which have a big sale in New York State and the East. The output of the cement block plant is large, consisting of plain, rock-faced and granite cement blocks. It keeps in its builders' supply yard, part of the great plant at Brighton, located on the Erie canal and the New York Central Lines, a complete line of masons' supplies, among which is Vulcanite Portland Cement and Penn-Allen Portland Cement; Wheatland Plaster Company's plaster; lime sewer pipe, flue lining, etc. It uses 25 teams for delivering material to jobs in the city. It is one of the leading builders' supplies firms in Rochester.

#### ALBION RETAILERS.

Albion, N. Y., Sept. 12.—Early in the '70's the cold storage, coal and builders' supply business was established and located by Walter O. Sheldon on the New York Central railroad near the depot in Albion. In 1888 Frank Morgan bought the entire plant and in 1891 Lyman S. Linson acquired an interest and since that time the business has been conducted under the firm name of Morgan & Hinson. A switch track from the New York Central Line runs alongside the warehouse, coal sheds and cold storage plant, accommodating eight freight cars. The firm does a large volume of trade and possesses excellent shipping facilities. It also operates a cooper shop in connection with its general business. The cold storage (ammonia) capacity is approximately 28,000 barrels and 7,000 common storage. The firm stables eight horses in its barn and employs four teams for hauling its material. They handle Universal Portland Cement, the product of the United States Gypsum Company, and M. A. Reeb's Buffalo "Peerless" wall plaster; lime in barrel and hydrate of the Kelley Island Lime & Transport Company and the Genesee Lime Company; drain tile of Camp & Co., of Pittsburgh, and common and pressed brick of the Flower City Brick Company, of Rochester, N. Y. Mr. Linson reported business had been good this year with prospects bright this

fall and that the farmer in the adjacent counties was using more cement this year than ever before.

F. H. Brooks has commenced handling builders' supplies only since last year. He operates an extensive coal yard which he established in 1903 on West Academy street and the New York Central railroad tracks. He has a warehouse of ample storage capacity handling Alpha Portland Cement and plaster of the Empire Gypsum Company, of Rochester, N. Y. His yard has a frontage on the street of 200 feet and a track frontage of 300 feet. He reports increased demand for cement in the farming districts and keeps two teams busy making prompt deliveries anywhere in the city limits. He is doing a good business and reports bright prospects for this fall.

The plant of Crowther & Kurtz is located on Fruit street on the south side of the New York Central tracks. It was established 23 years ago and the present owners H. Crowther and G. P. Kurtz bought it six years ago. They manufacture concrete blocks which have a good sale locally, and do a general contracting business in concrete construction, laying sidewalks, floors and erecting concrete buildings. They handle coal in large quantities, buy wheat and beans, which they store in one of their large warehouses, storing Lehigh Portland cement in a separate warehouse which holds over one thousand barrels of cement.

#### LOCKPORT RETAILERS.

Lockport, N. Y., Sept. 13.—Four years ago the C. B. Whitmore Company of Lockport, N. Y., was incorporated. It was founded in 1829 by W. W. Whitmore, and its main offices and builders' supply yard was located on the same site it occupies at present—30 and 32 Market street. It has two storage yards in Lockport, one covering over an acre at the Erie freight depot, and another used for the storage of sand at the New York Central freight depot. Its white Medina sandstone and Lockport Limestone Quarries, possessing one hundred acres of valuable quarry land, are located at the northern city boundaries. The product of these quarries is used for dimension cut stone work of large character and in the smaller ledges of the quarries the product is used for curbstones and street work. A Gates No. 5 electrically driven crusher is operated, a dinky engine and dump cars running to it, supplying it with rock. Switch tracks run into these quarries from the New York Central, Erie and International trolley lines. Over 150 men are given employment here in busy seasons. The transportation facilities of the company are of the best, and amply adequate for handling the

enormous quantity of stone shipped to various parts of the country. It also manufactures concrete shingles, which have a large sale in the state. The company handles in its yards Universal, Atlas, Lehigh and Edison Portland cements. The storage capacity of its warehouses is large. The principal plasters sold are the product of the United States Gypsum Company and the Windsor plaster manufactured by J. B. King & Co.; Kelly Island Lime & Transport Company's hydrate and local lime in bulk; and spray lime of the American Lime & Stone Co., of Tyrone, Pa.; sewer pipe; common, pressed and architectural brick; flue lining, wall coping, expanded reinforcing metal and crushed stone a specialty. It does a general contracting business in city work, road work, street paving, concrete construction and laying of water, steam and sewer mains. It is one of the largest and most progressive firms in western New York. Its officers are W. W. Whitmore, president, and H. C. Whitmore, secretary and treasurer. The Whitmore name is identified in New York and the New England states with the stone industry.

M. J. Crowe established his coal and builders' supply yard in 1893 at 87 and 89 Lock street, which runs back one block to Gooding street; a switch track runs into it from the New York Central Lines, accommodating six freight cars. His warehouse has a storage capacity of over 1,000 barrels of cement and plaster. His barn stables seven head of horses and two double and one single team are used to haul material to jobs. He handles Atlas Portland cement, Paragon plaster of the Paragon Wall Plaster Company of Buffalo, Lockport lime in bulk, sewer pipe, sand and gravel. He reports business fair this year and prospects bright for fall.

One of the old firms in Lockport handling builders' supplies is that of C. N. Stainthorpe & Co. It was established in 1876, has an old established trade, and does a large business on old conservative lines of a quarter of a century ago. Their office and yard is located at 126 Main street, Lockport, N. Y.

#### NIAGARA FALLS RETAILERS.

Niagara Falls, N. Y., Sept. 14.—William S. Humbert, Inc., has offices in the Gluck building and operates three builders' supply yards, one at Ninth street, one at Tenth street and one at Eleventh street, covering three and one-half acres of ground. These yards are on the New York Central and Erie lines. Switch tracks from both these roads run into the yard located at Ninth street, with a switch track running into the Tenth street yard from the Erie railroad. The Eleventh street yard is called its "block yard," where concrete blocks are manufactured which have a large local sale. Its three warehouses have a combined storage capacity estimated at about 60,000 barrels of cement and plaster. The barn at Ninth street stables eight head of horses, which are said to be the finest horses in the state and in which the company takes great pride. It uses these horses and four double teams for hauling its material. It handles Universal, Atlas, Pen Allen, Vulcanite and Copley Portland cements, much of which it sells at wholesale in carload lots; United States Gypsum plasters; Retley Island Lime & Transport Company's lime in barrels and hydrate, gravel, sand, crushed rock, and handles as good a line of pressed brick as is handled in the Empire state, with a full line of builders' supplies. This business was founded by William S. Humbert nineteen years ago and incorporated in 1901 with Burton J. Mitchell, president.

The builders' supply yard established at 822 Cedar avenue in Niagara Falls, N. Y., by John Sandstrum & Son, was merged six years ago into



GRAY &amp; JONES, MASONS' SUPPLIES, ROCHESTER, N. Y.



the Niagara Falls Builders' Supply Company, of which E. F. Sandstrum is treasurer and manager. The yard runs through an entire block to Spruce avenue. It is located on the Erie Railway and has a switch track running into the yard from the main line which can accommodate fifteen freight cars. Its warehouse has a storage capacity of 5,000 barrels of cement and plaster. The yard is centrally located in the city and possesses the best of shipping facilities. It handles Lehigh, Crescent and Newcastle Portland cements; M. A. Reeb's Buffalo "Peerless" plaster; Kelley Island Lime & Transport Company's lime in barrels and hydrate; sewer pipe and fittings manufactured by the leading firms in Akron, O.; sand, gravel, crushed rock and a complete line of builders' supplies. Mr. Sandstrum reported business fair, but not up to the expectations of last spring.

#### NORTH TONAWANDA RETAILERS.

North Tonawanda, Sept. 15.—The Ives Ice & Coal Company's plant and builders' supply yard was established four years ago at 156 Oliver street, North Tonawanda. It is located on the New York Central Railroad and has a switch track running into the yard. The arrangement of driveways, location and construction of warehouses is up-to-date and perfect in economizing, handling and promptly making deliveries of building material to jobs. Its warehouse is admirably constructed, having solid concrete floors, to bear the heavy weight of 1,500 barrels of cement resting on them. The company owns nine teams and an auto truck, which are employed to do the hauling. It operates an artificial ice plant and besides has a large warehouse in this yard where it stores natural ice. Its principal trade is in coal and ice. It handles Atlas and Universal Portland cements; M. A. Reeb's "Niagara" plaster; Genesee Lime Company's lime; sewer pipe from the leading Ohio manufacturers; flue lining, fire brick, wall coping, etc., from the Robertson Clay Company; sand, gravel, common and pressed brick. F. W. Ives, the company's president, stated that this was the best year it had ever had and that prospects for fall business were exceedingly bright.

The builders' supply and coal yard of the A. A. Rose Estate at 92 Goudry street, North Tonawanda, has been in existence for over a quarter of a century. Its warehouse has a capacity of storing one thousand barrels of cement, plaster and lime. It owns and uses for hauling four teams and two singles. The volume of trade it commands in builders' supplies is large, handling Lehigh, Cayuga and Edison Portland cements; M. A. Reeb's "Peerless" plaster; Kelley Island Lime & Transport Company's lime in barrels and hydrate; sewer pipe, flue lining, wall coping, etc., of the Robinson Clay Company; sand and gravel. Its shipping facilities are excellent, having switch tracks in yard both from the New York Central and the Lehigh Valley railroads. T. M. Rose, manager of the Rose Estate for the past nine years, stated that business has been as good as last year and that prospects for fall business are brighter.

Bunyan & Evans, of Hammond, Ill., who are retailers of builders' supplies, are seriously considering installing a complete concrete block plant for the manufacture of blocks and other concrete products.

Spontaneous combustion in a big warehouse belonging to Louis Des Cognets & Bro., prominent building supply men of Lexington, Ky., was the cause of a fire a short time ago, resulting in nearly \$1,000 loss.

#### ENTERPRISING VIRGINIA FIRM.

Mossman Bros. Co., of Huntington, W. Va., is among the leading retailers of builders' supplies in that section of the country, handling on an average 800 to 900 cars of material annually. They also do a considerable business in hay, grain, flour and feed. Besides the salesrooms where the general office is located, they have two other warehouses, one of which is 75 by 90 feet, 1 story and basement, and one 100 by 210 feet, 2 stories with private siding; covered loading shed 40 by 210 feet, electric elevator and all modern equipment. They are at present using six teams in the delivery end and are investigating the motor truck with the idea of substituting this method of handling their materials to the job.

The Center Lumber Co., of Burgess, Ill., are in the market for conveyor buckets.

The Oreeal Construction Company, Wilmington, Del., was incorporated under Delaware state laws September 8; capital \$100,000.00.

#### BIRMINGHAM RETAILERS.

Birmingham, Ala., September 16.—With every feature of local conditions possessing an upward tendency, conditions in all lines of the building trades are decidedly interesting throughout the entire Birmingham district and unusual activity both in buildings projected and actual operations denote an optimistic significance.

The gigantic building for the American Trust & Savings Bank, which is to be eighteen stories in height, is now well under way. The contract for the structural steel required for the building was awarded a few days ago to the American Bridge Co., of New York, and the numerous sub-contracts will be let this week, so William L. Welton, supervising architect, stated to a representative of ROCK PRODUCTS yesterday.

Work on the Ledger building, the new Y. M. C. A., the Drennon building and the First National Bank building, which is being remodeled at heavy expense; the Burnett building, and a surprisingly large number of smaller business buildings, is progressing rapidly and demand for skilled labor has become so strong systematic efforts are being made, with the cooperation of the Birmingham Board of Trade, to secure artisans from other less active communities.

Among the contracts in the residential class, which is far heavier in the Birmingham district at this time than has been noted in years, are the following: G. B. Edwards & Co., supply dealers and contractors of Bessemer, has been awarded the contract to construct ten handsome homes, four of the ten to be concrete, on the newly developed property of the Woodward Iron Co., at Woodward, a suburb of this city. Edwards & Co. are agents for Standard Portland Cement and Saginaw lime. Each one of the ten residences included in this contract is to cost from \$6,000 to \$9,000, and the work of construction has already been begun. These homes are to be occupied by the more responsible employees of the Woodward Co.

The Cavanaugh & Marks Company is at present engaged in constructing seven houses in Woodlawn and North Highlands, with plans for a number of others now being drawn.

The work on the many new homes at Corey, contracts for twenty-six of which were recently awarded the Realty Construction Co., is progressing rapidly.

The Ensley Land Company has just built thirty residences near the gateway to Corey, and residences and business buildings, both, are being erected by the score near and around the \$1,000,000 plant of the Louisville & Nashville Railway, at Boyles, another suburb of Birmingham.

The Tidewater Railroad is being rushed towards Birmingham from both directions, Ensley and Woodlawn, and the early part of the coming year will find it in operation. The Tuscaloosa mineral roadbed is almost ready for rail laying, work has already been begun on the Chattanooga & Montgomery Railroad, and several other smaller projects, linked with the Birmingham district, are being pushed, while steady improvement work on the main lines of the Southern, L. & N. and Seaboard, involving hundreds of thousands, are twice-told tales.

Among the larger projections which are just now being given publicity are the two new hotel buildings, one for the corner of Twenty-second street and Fourth avenue, and the other on the northwest corner of Nineteenth street and Fourth avenue.

The first is to be erected by William Hood, a prominent capitalist of this city, and plans are now being drawn for it. It is to be a hundred-room hotel building and will represent an expenditure of \$150,000.00. Miller & Martin are architects for the Hood Hotel, as it is thought the building will be known.

The other project is to represent \$1,000,000.00 and will, it is stated, rival any hotel building in the United States when completed. W. J. Dangaix, who has lately returned from a trip to Paris, France, is one of the leading spirits in this enterprise, and both Mr. Dangaix and those interested with him, including M. V. Joseph, one of the mercantile princes of the south, are men of large wealth capable of handling such a deal. The details of this undertaking are still in an embryonic state, though positive statements have been made that the structure will be shortly under way.

The last meeting of the Builders' & Traders' Exchange, of this city, was unusually well attended, and much enthusiasm over the prospects of the organization was manifest. The most important feature of the meeting was the report of the committee on revision of the constitution and by-laws of the exchange, which was unanimously adopted. The scope and purpose of the exchange is so well illustrated by the revised regulations, as adopted, that Article 11 is quoted herewith.

The object and aim of this organization shall be to protect and encourage the building industries of Jefferson county; to foster the growth and progress of the community by promoting the erection of well planned, properly constructed and equipped public and private buildings; to inculcate just and equitable principles of dealings with contractors, sub-contractors, architects and dealers in building materials, to the end that membership in this exchange shall be a reasonable assurance of skill, honorable reputation and reliability; and to promote the education, manual training and general welfare of the artisans of the community, as well as the recognition of good workmanship, fidelity and the right to labor; to acquire, preserve and disseminate business information; to avoid and adjust as far as practical, the controversies, misunderstandings and difficulties liable to occur between persons engaged in the building trades; to establish and maintain a central office and headquarters, with facilities for ease and convenience in the transaction of business, as well as for conferences between members, trade and kindred organizations to provide a means of acquaintance and social enjoyment and to enlarge the views of those who may become members; but it is not the purpose or intention of this exchange as such, to in any way fix, regulate, or control prices or to curtail any of the rights or privileges of labor.

Following the adoption of these articles, of which the above is only a part, a general discussion of the future welfare and policies of the exchange was held, in which a majority of those present took part.

The officers of the exchange are John W. Sibley, president; Frank H. Connor, first vice-president; Allen J. Krebs, second vice-president; J. H. Eddy, treasurer, and G. T. Stafford, secretary, and the exchange now occupies the entire sixth floor of the Chamber of Commerce, many interesting exhibits having been installed.

At the conclusion of the business routine the meeting resolved into a social session, in which good smokes, an appetizing lunch and liquid refreshments served their part.

The Southern Sewer Pipe Co., of this city, one of the largest manufactories of vitrified pipe in the South, has lately secured several large contracts, J. A. Milson, manager of the company, stated to a representative of ROCK PRODUCTS a few days ago.

Among the contracts was one for \$90,000 worth of sewer pipe for Mobile, Ala., most of which is either already enroute or ready to be shipped; \$80,000 worth of sanitary and storm sewer pipe for Pensacola, Fla., and numbers of smaller orders ranging from \$20,000 to \$35,000 for towns in Alabama, North and South Carolina and Mississippi.

The J. W. Gurley Co., Mobile, Ala., which is executing several large street and paving construction contracts in Birmingham, has the contract for the Mobile sewer work for which the Southern Sewer Pipe Co., of this city, is supplying the pipe.

The Prentice-Webster Building Company, of Manhattan, has been incorporated to carry on a building and real estate business, with a capital stock of \$25,000. The incorporators are: M. L. Prentice, Floral Park; S. Webster and R. S. Kristeller, of Brooklyn, N. Y.

The Waterhouse Lime & Stone Company, dealing in building supplies in Chattanooga, Tenn., was elected to membership a few days ago in the Manufacturers' Association of that city. The association, one of the best-known trade-boosting organizations in the South, has inaugurated a big campaign for increased membership.

The Cadwell Company, of Englewood, N. J., has been incorporated with a capital stock of \$25,000 to do a building, contracting and real estate business. The incorporators are: C. D. Inman, of Ridgefield, N. J., and R. H. Hyde and B. Clark, of Englewood, N. J.

#### CONCRETE LIGHTING STANDARDS.

Denver, Colo., Sept. 18.—Concrete lighting standards as odd as picturesque in design, will shortly be erected along the new Seventeenth avenue parkway from Colorado boulevard to Dahlia street, a distance of eight blocks.

In character the columns are similar to the ones now in use in Lincoln Park, Chicago. They are ten feet in height and will be capped with strips of bronze. Large globes at the top will carry 75-watt series tungsten lamps. Fifty of the standards are at first to be installed. Twenty-five on either side of the boulevard at 100 feet distance from each other. If these are proved to be satisfactory, lights to completely light the entire boulevard, twenty-six blocks in length, will be installed.

The cost of the concrete work itself has been specified in the contract recently let by the board of public works to Rett and Cecchini, ornamental plaster and cement contractors. The cost of the concrete standard alone is specified at \$20 per unit. With all incidentals the column will average \$16 in addition. Work on the standards is to be started at once, and as soon as they are completed they will be erected and put in service.



## The National Lime Manufacturers' Association

Meets Semi-Annually.

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## USES OF LIME

### A Discussion of the Various Uses of Lime, the Kinds of Lime Required and the Method Used—Lime in the Tanneries.

The many uses of lime in the arts and in science astound the investigator. There are few materials of commerce that are employed in such a variety of ways as lime is. It is the purpose of **ROCK PRODUCTS** to present to the dealer an exhaustive series of articles on lime covering the manifold ways in which it is used. The purpose of this series is to give the dealer the best that is obtainable on the subject, in order that he may be fortified with all the possible selling points and be better able to interest the customer in lime. This means the sale of more lime. That is the important point in the enterprise, both for the manufacturer and the dealer. Every word on every page of **ROCK PRODUCTS**, from the first number to the present one, has had for its object the increased sale by the dealer of the commodity mentioned, whether it was lime, cement, plaster, or any of the other products promoted by this publication. So with lime, in the articles that will appear in this department. Read and study them, and then—sell more lime.

R. W. Griffith, an expert on the subject of the use of lime in the tannery, presented a paper on the subject a few months ago before the tanners at their annual convention. He told in detail of the manner in which lime is used in the conversion of the hide into leather. Among other things he said:

#### The Principles of Liming.

The use of calcium oxide in the preparation of the hides for tanning dates back to antiquity; nevertheless, its use marks the introduction of the first manufactured chemical into the art and mystery of tanning.

Lime, because of its limited solubility, which permits of its use in extravagant excess, is an ideal material with which to treat hides in their green state, which is perhaps their most sensitive condition, although its presence in later stages of the tanning process causes considerable trouble. Yet, in spite of many objections to its use, and the fact that as a depilatory it has many competitors, lime continues to be the most popular beam-house material today.

Lime is unfortunately a very variable commodity. From the tanner's standpoint, its value is determined by the amount of calcium oxide which is present. In commercial lime this fluctuates between 50 and 99 per cent. Lime containing less than 50 per cent calcium oxide should not be used for tannery work. The common features of a poor lime are caused by bad burning of the limestone and the presence of magnesium and iron oxides.

A good lime will slake easily and crumble into a fine powder. The presence of magnesia makes slaking very slow and difficult, and its presence to any extent is very objectionable on this account.

The methods of using lime are as varied as the foliage of a forest in Autumn.

A good lime liquor should be such that when agitated, all the lime particles should be suspended in the liquor, forming a fairly thick milky solution without any great amount of lime paste remaining at the bottom of the vat.

With a good commercial lime, say containing 90 per cent calcium oxide, it is possible to obtain depilation with one per cent of such lime based on the hide weight. But in order to obtain results with such a small quantity, conditions would have to be adjusted in such a way as to be hardly practical in the tannery. A good practical lime liquor can be prepared with 5 per cent of a good lime on the basis of the hide weights.

The lime should be slaked in a tub some hours before it is required for use, in order to ensure complete hydration of the calcium oxide. The amount of water used in a vat should be adjusted so as to just cover the hides when they are immersed in it.

The value of clean limes has been recognized by sole leather tanners for many years, but in the manufacture of upper leather, it is only since the chromium tannages have been commonly adopted that their value has been appreciated in this section of the industry. Previously, it was the common practice in upper leather manufacture to employ chiefly stale lime liquors.

It is rarely the practice in any tannery today to prepare a fresh lime for each pack. It is a good method, however, to use the liquor from one pack to make up a new liquor for a fresh pack, and afterwards to run that liquor away.

In this way a certain "mellowness" is always present, and the "harshness" of a new lime is avoided.

The mellowing of a lime is caused by the solution of hide matter into the liquor, which produces ammonium salts. This effect can be produced artificially by the addition of ammonium sulphate to the lime liquor.

Liming has a remarkable influence upon the character of leather. The shorter the process of liming the firmer and "tighter" the leather. Long liming tends to produce soft loose leather. The two extremes of liming are well illustrated in the production of sole leather on the one hand and glove leather on the other.

The maximum plumping of a hide by lime is reached in eight to nine days, after which the hide commences to deplete.

A well limed hide which has become depleted can be made plump by immersion in cold water.

The plump effect on a hide is caused by the hydroxyl group of the calcium hydrate.

In the case of an acid plumping, the action is due to the H ion. It is interesting to note in passing that salt effectively prevents the hydrogen ion from plumping hides, whereas it exercises no influence at all upon the hydroxyl group.

Before proceeding further to a consideration of plumping, it would be well to examine first the manner of the absorption of lime by the hide.

We find by an analysis of the limed hide, that it contains considerable more calcium oxide than is contained in a saturated solution of lime.

We cannot explain the presence of this calcium oxide in the hide by inferring that it has become mechanically deposited there, because in the first place the half of the hide provides an excellent filtering medium for the suspended particles of lime, and the web-like tissue on the flesh is no less an obstacle to the inroads of solid lime.

The most practical explanation, therefore, would appear to be that a process of dialysis is going on where the saturated solution of hydroxide enters the fibres, and by reason of an affinity which the fibre has for the oxide, the latter is deposited and the water of the hydroxide being liberated, passes to the surface, where it becomes charged again with the oxide and repeats the process.

The immersion of limed hides in warm water causes a depletion, not because of the removal of the lime, as the solubility of lime is known to decrease with the advance of temperature, but because of the physical influence of temperature upon the hide, the tendency of the hide being to go into solution itself.

The time required to remove the hair by means of lime varies considerably and depends largely upon the manipulation of the process. Depilation can be accomplished in twenty-four hours with the aid of warm water, or it may extend to nine days.

The theory of the action of lime as a depilatory is as yet unsettled. Proctor lends his support to the theory that the depilating action of lime is principally a bacteriological one, and Eitner furnishes some evidence in support of this view.

On the other hand, Von Schroeder contends that the action is purely chemical and has published some interesting observations on this point.

The evidence which is submitted in favor of the bacteriological theory appears at first glance to be well founded, but on closer examination it is found to be far from conclusive.

It is claimed that a sterilized hide in a sterilized lime liquor will not depilate.

A process of liming—patented a few years ago, and known as the Pullman Liming Method—apparently supports this claim. This process is very ingenious and consists in treating the hides in a solution of a definite strength of caustic soda, and afterwards in a bath of calcium chloride.

Definite measures of lime, based on definite weights of hide, in definite volumes of liquor, make for successful liming.

The mechanical operation of drawing the hides should be at regular intervals. When the operation of liming is carried out in a methodical manner, it will be found that the pelt weight of the hides after unhairing and fleshing is a very constant factor in hides of the same class, and the weight of hides at this stage provides an excellent criterion of the yield in tanned leather.

It is the common practice in England to weigh all the hides in the white pelt condition, and in this way an excellent indication as to whether the hides are profitable or not is obtained.

The English method of liming for sole leather is somewhat different from that employed in this country. No reels are used and the pack is usually limed in a single vat.

The lime vats are built with a "fender" which has a surface measurement about equal to that of the vat, and the fender is so constructed that it slopes into the vat about 16 inches. A great deal of space is thus occupied by each vat.

The hides drawn from the vat on to the fender each day and allowed to drain for about an hour, when they are returned.

The average time of liming in England is about six days.

The greatest care is exercised to see that the hides are well spread out and kept flat during the liming operation, and the reason for this is the belief that this care ensures a freedom from "baginess" in the finished leather, and allows the leather to be rolled flat.

### BUSINESS IS GOOD.

The Western Lime and Cement Company, Milwaukee, Wis., reports business conditions in good shape. The company has kilns at Oshkosh, Clifton, Grims, Knowles, Hayton, Brillion, Sherwood, Kewaunee, Sheboygan, Eden, Hamilton and Mayville. They are the largest manufacturers of white lime in the United States, with a daily capacity of 1,000 barrels. They also deal in fire clay, plastering hair, fire brick, etc.

### NEW YORK LIME NEWS.

New York, September 12.—Conditions in the local lime market have not been subject to change during the past month, and business on the whole has been quiet. The majority of dealers looked for an increase in the demand for lime during the early part of September, but to date their expectations have not been realized. Collections continue slow and dealers are complaining of the scarcity of ready cash. Improvement in conditions are looked for in the next month or two, but some dealers are of the opinion that it will not be up to the normal.

F. F. Comstock, president of the Comstock Lime & Cement Company, speaking of the conditions in the local lime market during the past month, stated: "There was not any improvement noted in the lime trade during the past month, and business continued along quiet lines. We expected the demand for lime to increase by September 1, but up to the present moment our expectations have not materialized. We look for a little improvement in conditions in the next month or two, but do not believe that it will be up to the normal. Many dealers are complaining of the difficulties in making collections, but we have been rather fortunate in this respect, as we are very careful to whom we sell."

E. B. Morse, of the Frank B. Morse Company, added: "Business in the lime trade was quiet during the past month. The fall demand has not commenced, and that, combined with the spell of rainy weather experienced during the last week of August, affected building operations considerably. Conditions, however, are expected to improve in a large way during the next month, when the fall demand is anticipated."

O. F. Perry, of the Rockland-Rockport Lime Company, added: "The demand for lime during the past month was fairly active, but nothing to brag about. We find that collections are easier to make. The fall business has not started to come on yet, but we expect it to materialize in the early part of October. Prices remain unchanged and are as follows: Common lime, 200-pound barrel, 92 cents; 300-pound barrel, \$1.37. Finishing lime is quoted as follows: 200-pound barrel, \$1.02; 300-pound barrel, \$1.47; 350-pound barrel, \$1.62; in lots of 500 barrels."

The Shaffer High Grade Lime Company, Pottsville, Pa., was incorporated under Pennsylvania state laws August 10; capitalized at \$5,000.00.

About 450 tons of crushed rock is being turned out daily by the stone crushing plant of J. L. Mars, of La Grande, Ore. Thirty men are employed.

The Maryland Standard Lime & Stone Company will start work soon on the erection of a \$1,000,000 cement plant at Morgantown, W. Va. The company is well and favorably known in Pittsburgh.

Dr. Thomas F. Nolan and C. J. Arnold, of Reynoldsville, Pa., have organized the Reynoldsville Lime & Coal Company. They will build a big lime kiln near Pancose, Pa., where they own a considerable deposit of fine limestone.

The Charlevoix Rock Product Co., who are manufacturers of hydrated lime and sugar rock, having a capacity of 60 tons per day, are going to install a crushing plant with 1,000 tons capacity per day. This company was formerly known as the Standard Cement & Lime Co.

The Beaver Valley Lime Company is making extensive improvements to its plant near Ellwood City, Pa., including a 50 horsepower electric motor. The plant is owned by J. V. Cunningham and others of Newcastle, Pa., and has a capacity of 5,500 tons daily, and has some splendid orders booked at present.

The Kritzer Company, Chicago, Ill., are furnishing the Allis-Chalmers Company, of Milwaukee, Wis., with a complete hydrating outfit, which is being installed in the plant of the Basic Products Company, at Kenova, West Va. This will be one of the largest plants manufacturing hydrate in that section.

A new lime crushing plant is being located at Gadsden, Ala., by a company of local business men headed by W. W. Hendricks, of Nashville, Tenn. The quarries to be developed by the new company are located at Lagarde, Ala., adjacent to Gadsden. The plant will be operated by water power and will have, it is stated, a large capacity.



# SAND-LIME BRICK

## SAND-LIME BRICK FACTORY.

The accompanying photograph shows a panoramic view of the Buick Automobile Company's factories at Flint, Mich.

These buildings are undoubtedly the largest group of buildings in the world built of sand-lime brick. This product was used exclusively in the construction of all the buildings. The photograph shows only a part of the factories, which, in their entirety, cover sixty acres.

Twenty-five million sand-lime brick were used in the construction work.

It has frequently been questioned as to whether sand-lime brick will stand severe cold weather. The Silicate Brick Company, of Ottawa, Ont., Canada, has erected several structures of sand-lime brick in that cold climate and the bricks have never suffered from having snow piled up around them for five or six months of each year. This is an evidence that sand-lime brick will successfully stand the exposure to a temperature below freezing.

A sand-lime brick plant in Germany has a capacity of \$350,000 brick per day.

The Tift Silica Stone & Brick Company, Albany, Ga., is adding a 16-mold rotary press to its outfit.

The Golden Gate Brick Company, of California, states that business is good and improving daily.

The National Pressed Brick Company, of Detroit, Mich., has contracted for a wet pan and rotary press.

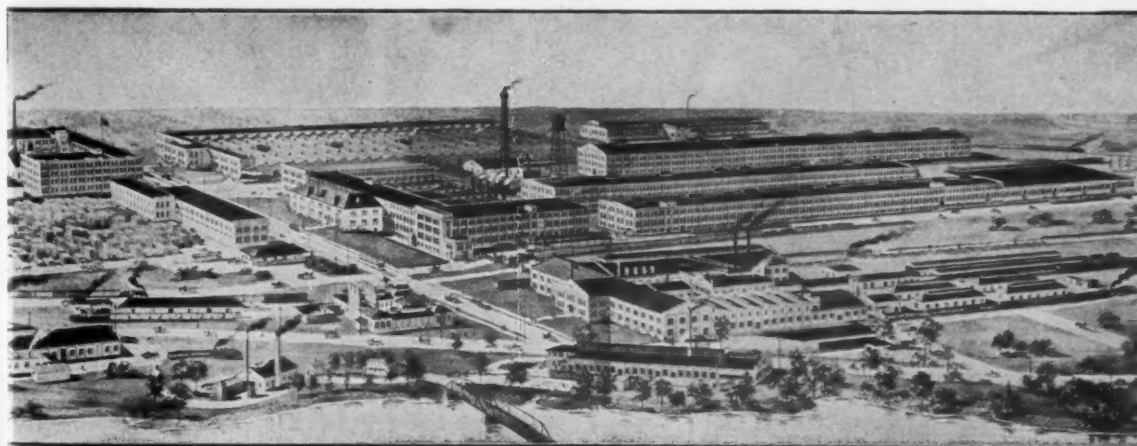
Dr. Wilhelm Michaelis, known as the father of the sand lime industry, died recently at the age of 70 years.

The New England Brick Company, of Farmington, Conn., began operations some time ago and reports business good.

Recent advices from Germany state that there are 280 sand lime brick plants operating in that country. In 1902 there were only 80 plants making that product there.

The Progressive Brick Company, Heed Building, Philadelphia, Pa., is reconstructing part of its factory and installing a wet pan and rotary press for high grade face brick.

In 1900 twenty-six sand lime brick manufacturers met in Berlin and organized the Union of Sand Lime Brick Manufacturers, and their last convention was held in Berlin February 24, this year. The organization is a good one and only manufacturers whose material is up to the organization's official standard can become members.



BUICK AUTOMOBILE COMPANY'S FACTORIES BUILT OF SAND LIME BRICK.

## LEXINGTON AVENUE SUBWAY.

New York, Sept. 12.—A tangible idea of the immensity of the task ahead of the Bradley Construction Company, which has the contracts for the bulk of the work on the Lexington avenue subway, may be gathered when it is stated that this corporation has just paid \$300,000 for the purchase of a site to be used as a base of operations and will probably pay \$200,000 next week for certain river front land which it purposes to fill in with earth excavated from the tunnel.

The property for which \$300,000 has been paid constitutes the B. T. Babbitt estate, in Long Island City, near the Queensboro bridge, and fronts 400 feet on East river. It runs back 500 feet to Vernon avenue, on which it fronts 400 feet. In the center of it is the old Babbitt homestead, which was formerly the residence of the millionaire soap manufacturer, but which has been occupied only by a caretaker for twenty years.

The company intends to erect machine shops on this property and will use it as a storage yard for the immense quantities of supplies which will be used in subway construction. A pier will be constructed and the company will operate its own line of ferryboats in transporting material across the river to the foot of East Sixty-second street, Manhattan.

The contract for the foundations of a new warehouse to be erected for Havemeyer & Elder at North Tenth and Kent streets, Brooklyn, has been awarded to the Raymond Concrete Pile Company of New York and Chicago; Cross & Cross, architects.

The Raymond Concrete Pile Company, of New York and Chicago, has been awarded the contract for the concrete piles and foundations of the new office building to be erected for the Murphy Iron Works at the foot of Walker street, Detroit; George V. Pottle, architect.

The Margate Coal, Lime and Cement Company, of Margate City, N. J., has been incorporated with a capital stock of \$25,000 to deal in lime, cement, building materials and coal. The incorporators are: H. R. Rupp, of Egg Harbor City; C. E. Rupp and G. J. Rupp, of Atlantic City, N. J.

The New York Preservative Company has been incorporated at Manhattan, N. Y., to manufacture preparations for preserving and hardening stone, cement, concrete, etc. The capital stock is \$125,000. The incorporators are M. H. Downing, 441 West Twenty-third street; B. H. Snyder, 342 Manhattan avenue; B. D. Phillips, 172 Park place, all of New York City.

Gibbs Gas Engine Company, Atlanta, Ga., has changed its name to the Standard Gas Power Company. The reason for the change was given as follows: "The Gibbs Gas Engine Company has found in the past that the name of the company tended to indicate manufacturers of gas engines only, which has resulted in considerable confusion, which the company seeks to avoid by changing the name to the Standard Gas Power Company, as more fittingly defining the wider scope of the business; namely, the manufacture of gas producers for both fuel and power as well as gas engines."

# CLAY

## NEW BRICK AND TILE WORKS AT CASTLE ROCK.

Denver, Colo., Sept. 16.—With the intention of blowing in the first kilns before October 1, work is being rushed on the new brick and tile works at Castle Rock, Colo.

The buildings of the company, which are in the southeastern part of town, are about completed and the machinery is in place. The plant has new and up-to-date machinery for the manufacturing of a high grade vitrified brick. The company has purchased twenty acres of land, known to be underlaid with excellent shale adapted for making the brick which the company is going to put on the market. Neal Allen, manager of the company, pronounces the shale equal, if not superior to the shale found at Atchison, Lawrence and Pittsburg, Kansas, where the finest quality of vitrified brick thus far produced in the West is now being made.

In starting, the plant will have a capacity of about 50,000 brick per day. Later it is expected to double the output and increase the number of workmen. Mayor M. J. Casey of Castle Rock is secretary of the new company and C. L. Kirk of Denver, president.

## PITTSBURGH CLAY NEWS.

Pittsburgh, Pa., Sept. 19.—Allen B. Creighton, recently of Chester, W. Va., has succeeded in organizing the Summitt Brick Company, whose plant will be located at Summittville, Columbiana County, Ohio, on the edge of the Pittsburgh district. His officers will be George Christlieb, president; Thomas W. Norton, vice president; Oliver Bein, of Wheeling, Pittsburgh, manager, and Ross Rue, of Alliance, Ohio, general manager.

A modern silica brick plant will be built this fall at Mt. Union, Pa. The company has a capital of \$300,000 and the plant will have a capacity of 40,000 brick per day, which is to be doubled in a few months. C. V. Hickman, who was formerly superintendent of the Harbison-Walker Refractories Company, of Pittsburgh, will be manager, and associated with him will be Wilson Kistler, P. P. Griffen, F. D. Haistead and R. P. M. Davis of Lock Haven, Pa.

The Huntington Clay Products Company has been organized by capitalists of Huntington, Pa., Pittsburgh, Dayton and Columbus, Ohio, the prime mover being T. H. Millard. A plant will be located at Huntington and will have a capacity of 100,000 brick per day. The company has a capital of \$75,000.

The Osceola Fire Brick Company, through its Pittsburgh representative, C. R. McClintock, has secured the contract to furnish the Crucible Steel Company of Pittsburgh 2,000,000 fire brick for its open hearth furnace to be built at Midland, Pa.

The Bickford Fire Brick Company, which has a big trade in this city, let the contract to the Stephens-Adamson Manufacturing Company, of Pittsburgh, for a swing elevator with a capacity of 25 tons an hour for its plant at Curwensville, Pa. It will be used for handling clay from the railroad siding.

## ILLINOIS CLAY NEWS.

Springfield, Ill., Sept. 21.—The Minonk Brick & Tile Company, of Minonk, has added to its mechanical equipment, which will make possible an increase in its present commendable output of six cars a day.

The Illinois Drain Tile Company, with headquarters at Albion, is the title of a new corporation for which application papers were filed at Springfield, with an announced capital stock of \$20,000. The applicants were James C. Carlyle, superintendent of the Albion Vitrified Brick Company; George C. Ziegler, of Carmi, and Samuel A. Ziegler, cashier of the Albion National Bank. It is said the site of the old Edwards Vitrified Brick & Sewer Pipe Company, near the line of the Southern Railway, will be used. Considerable new machinery will be installed, it is said.

# QUARRIES

## GOOD ROADS CONGRESS IN SESSION.

As we go to press the Fourth International Good Roads Congress and Exposition, under the auspices of the International Good Roads and Automobile Association, the National Good Roads Association, the National Good Roads Congress, the Illinois State Good Roads Association, and the Chicago Good Roads Association, is preparing to close the first week of its two weeks' meeting. The convention is being held at the Hotel La Salle, Chicago, and the dates are September 18 to October 1.

Plans for three great national highways, one crossing the continent from east to west, one from north to south, and the third of historical interest, will be among the subjects discussed.

Arthur C. Jackson is president of the congress and C. E. Bryan secretary. They expect the attendance to increase daily as the convention continues.

Besides the Jackson memorial highway, a national turnpike from Los Angeles to New York and the proposed Lincoln memorial highway will be debated.

Among the distinguished guests present at the congress were: J. C. Alves De Zima, of Sao Paulo, Brazil; Colonel Pedro Cerda, military attache at the Mexican embassy, Washington; Governor John Shafroth, of Colorado; Enrico Palmetto, of Copenhagen; Mayor Harrison, of Chicago; Governor Deneen, of Illinois, and Mrs. Edwin Curry, president of the International Sunshine Society and chairman of the civic department of the Council of Clubs, of Kansas City, Mo.

## AMERICAN ROAD BUILDERS' ASSOCIATION.

At a meeting of the board of directors of the American Road Builders' Association, held at the Hotel Astor, New York City, on September 2, it was voted to accept the invitation of the city of Rochester, N. Y., to hold the next annual convention of the association in that city, November 14 to 17, inclusive.

The sessions of the convention will be held in Convention Hall, a building erected through an appropriation of the common council of the city especially for the accommodation of gatherings of this kind. An exhibition of road-building machinery and materials, similar to those which have added so much to the value of former conventions of the association, will be held this year. The convention hall seats 4,000, and the exhibition hall, under the same roof, offers about 35,000 square feet of floor space in the two floors and basement which are available.

The unusual facilities afforded at Rochester will do much to enhance the success of the convention, and the directors of the association feel that the city's favorable geographical location insures a large attendance. Rochester is well known throughout the country as a convention city, and probably no city in the country has a greater variety of up-to-date roads and pavements.

The program has not yet been made up, although at the last meeting of the board of directors it was decided that the papers and discussions should be limited to the subjects of organization, construction and maintenance. According to the present plans, each paper presented will be discussed by two delegates, previously selected, after which the discussion will be open to the convention. At least one session will be given up to contractors.

The seventh annual convention, held at Indianapolis last December, brought together upward of 1,400 road builders from the United States and Canada, and its success is well known. The citizens of Rochester are very enthusiastic over securing the convention this year, and assurances have been made by road and street officials throughout the state that the eighth annual convention will be, without question, the most successful ever held by the American Road Builders' Association.

## INSTALLING NEW CRUSHER.

We are in receipt of a recent communication from W. H. Loy, secretary and treasurer of The Stone Products Company, of Piqua, Ohio, in which he says: "Stone business in southern Ohio is rather late in starting this year, but we look for a good demand this fall, in anticipation of which we are increasing our capacity at our Piqua plant by the installation of a No. 7½ Gates crusher."

## EDWARD HELY

Has One of the Best Equipped and Arranged Rock Crushing Plants in the Southwest at Cape Girardeau, Mo.

Edward Hely has been crushing stone at Cape Girardeau, Mo., the past nine years. In 1909 he contracted with the Cape Girardeau Portland Cement Company, which had just started to build a 1,500-barrel cement mill, to furnish them with crushed limestone to make their cement. To do this caused him to do away with the old crusher and build a new one, which was finished early in



QUARRY OF EDWARD HELY AT CAPE GIRARDEAU, MO.

1910, and has been in constant operation ever since.

One of the accompanying photographs is a view looking up the loading track at the crusher. The conveyor shown overhead is going over the main line of the Frisco to the storage bin of the Cape Girardeau Cement Company. The other picture is taken with the operator standing on the incline, and shows the tracks, of which there are three, going up into the crusher. The south or left track going down to a lower level, the middle track going around to back of the quarry on a higher level, the north track going to the north quarry, about 800 feet away.

The crushing plant consists of a No. 8 crusher, into which all of the stone is first dumped. It is then elevated with a 72-foot elevator, discharging into a 48-inch screen. The return from this screen goes back to a No. 6 crusher, or a 14x42-inch rolls. The material from the No. 6 crusher and rolls is elevated by a second elevator and is discharged

into a 40-inch screen, returns of which go back to the rolls.

There is an arrangement by which Mr. Hely can put the product as desired onto the conveyor belt to go to the cement company bin or into any of the bins of 200 yards capacity each.

In the boiler and engine room, which is separated from the main crusher house, there is a 400-horsepower water-tube boiler on which is carried 150 pounds pressure.

The engine is a 225-horsepower Westinghouse compound. The compressor is a Sullivan W. B. 2, 900 feet capacity, compressing air to 100 pounds pressure. The air from this compressor is used to drill, pump water out of the quarries, and to run a hoist to pull cars out of the upper quarry.

Mr. Hely supplies the cement company with about 400 yards a day, furnishes the Frisco railroad and the St. L. & S. W. railroad with ballast, and also has quite a commercial trade in his product in all points south of the Cape, as the next stone south of this point down the Mississippi river will be found about Panama.

The plant is located on the Frisco tracks at Gulf Junction, two miles south of Cape Girardeau, a good city of 10,000 people, who are making considerable improvements in their streets for which Mr. Hely is supplying the stone.

The swamp country south of Cape Girardeau is being drained and improved, and rapidly becoming a garden spot. The next thing they will be wanting is rock roads, for which Mr. Hely hopes to supply the material. Two roads of ten miles each are now arranged for building and as it is in Missouri, these roads will "show them," and no doubt they will want plenty more of them, as automobiles are now getting as thick in that country as frogs were a few years ago.

All of the machinery in the crusher house was furnished by Allis-Chalmers Company, Milwaukee, Wis., whose machinery Mr. Hely has been using for the past twenty-three years, and he has never seen any reason to change from it, as it has always given good satisfaction.

The belting was furnished by the Main Belting Company.

Mr. Hely writes: "We think we have here if not the largest, the best arranged and built crushing plant west of Chicago."

## QUARRIES IN SAN FRANCISCO.

San Francisco, Sept. 12.—The North Bay Quarry Company has been incorporated in San Francisco, Cal., with a capital stock of \$25,000.00, by W. J. Hynes, M. Brady and J. E. Derham.

The Virginia Quarries Company was recently incorporated at Harrisonburg, Va., with a capital stock of \$25,000. The company will quarry stone and engage in the manufacture of lime.



EDWARD HELY'S CRUSHED STONE PLANT, CAPE GIRARDEAU, MO.



### ELECTRIC VERSUS GASOLINE BLAST HOLE DRILLS.

In figuring the kind of power most suitable for operating blast hole drills of the well driller type, on quarry work, a great deal depends on the power used in the quarry and its adaptability and convenience for supplying the motive power on outside portable outfits.

Electric power for operating blast hole drills of this character is satisfactory under favorable installation, or, in other words, if the power supplied to the drill can be maintained constantly without a marked degree of fluctuation of current, it is an ideal power in every respect, but in a big majority of cases the operation of electric motors on churn drills is not entirely satisfactory, as a great many strokes of the tools are lost, due to the dropping of voltage, which is caused by the throwing on and off of the various quarry machines in the average quarry outfit.

It is not always convenient or apparently does not justify the installation of a separate transformer for the drill only, but the line for the drill is usually taken off at most any convenient point with the result that the speed of the drill is constantly changing, due to the varying voltage.

For the average quarry machine a drop in the voltage makes no material difference and is scarcely noticed, but with the drill, which should run a certain number of strokes per minute, it makes a great deal of difference; it not only decreases the cutting speed but throws the cable out of adjustment as the cable properly adjusted, when running sixty strokes per minute is not of the right tension when reduced to forty or fifty strokes; therefore, to drill rapidly it is necessary to have an even, regular power as the slacking of power every five minutes 15 to 20 per cent cuts down the drilling rate at least 25 to 30 per cent, and figuring the time lost during the ten-hour run, it will soon pay for the fuel of an independent power plant on the machine and especially with a gasoline engine.

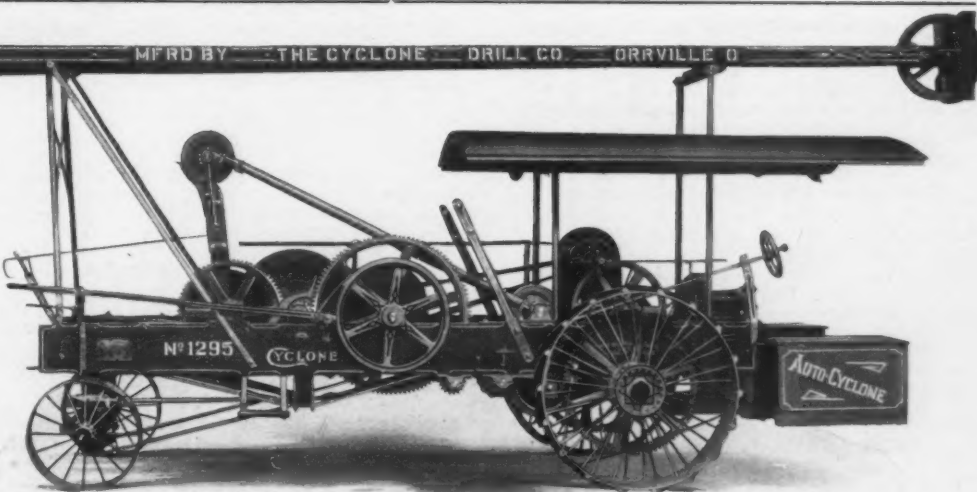
The Cyclone Drill Company has furnished a great many electrically driven outfits and they have all been satisfactory to the customer; some were installed drawing the current from a source where the fluctuation of current was scarcely noticed, others were installed where the fluctuation was very pronounced.

While the customer was satisfied, and the drill in his opinion, was running perfectly, from this company's experience with a large number of plants under favorable and unfavorable installation, also plants using gasoline and steam power, it is quite evident that the electrically driven machines working under unfavorable conditions would have shown a much larger earning capacity had they been equipped with other power which would have delivered a constant and uniform speed.

It is quite a difficult matter to convince the owner of an electrically driven quarry that motors are not always best to use on a drill; they are such a decided success on all other classes of machines around a quarry that he can hardly appreciate that a drill is so vastly different in its requirements of power that he usually insists on motor driven machines and will not go to the expense of properly installing it, so as to get the desired results of a motor driven outfit run under favorable conditions.

There is scarcely an objection to this kind of power and when once properly installed, the maintenance is very small. The stringing of the wires to the point where power is to be used covers the only expense necessary in its installation and in most cases this is a very small expense. Motors for this work must be of the variable speed, constant duty type to suit the current used and are built for either direct or alternating currents. The motors are fitted with controllers and resistance coils so that any speed may be obtained to suit the requirements, as the speed of this type of drill must be varied to suit the conditions of the material being drilled. Motors giving best results on this class of work are belted direct to the driving mechanism of the drill.

Back geared motors are not so well adapted on account of the rapid wearing of the gears, due to the jerking motion or intermittent power causing a back lashing of the gear, which soon becomes very noisy. It is an entirely different service than when the lead is constant, in which event the back geared motor works very well. The motor should be so speeded that when running at its maximum rated speed the drill will make from sixty to sixty-



four strokes per minute, at which speed it will drill the maximum number of feet per hour.

The power that gives universal satisfaction under all conditions and is best for economy and reliability, is gasoline power. The average man will shy at the mention of a gasoline engine. Perhaps the cause may be attributed to the many trials and tribulations which the gasoline engine passed through before reaching the perfected power, where it stands today. The average man, in thinking of gasoline power, can only think of the trouble he witnessed a few years ago, but if he will stop and consider the extremely short period of time through which the development of the gasoline engine was jammed and then think of the great many years covered in the development of satisfactory steam power, then he confronted with the fact that there are more than 1,000 horsepower of gas engines running to every horsepower of steam, he will realize what a factor gasoline plays in the world's motive power.

There are good and bad gasoline engines, just the same as good and bad steam engines and motors, but the gasoline engines which are being used today on drilling outfits are just as reliable in the hands of a man competent to run a piece of machinery, as steam can possibly be, and with many advantages over steam. Gasoline engines on the blast hole drills have given entirely satisfactory service. They can be used anywhere, independent of power plants. There are no wires to string or take care of, no alteration necessary other than starting, stopping and oiling, just the same attention is required in the motor outfit.

Gasoline engines used for this purpose must be flexible and under the control of the drill operator, so that any desired speed can be had instantly to meet the requirements of the changing conditions of the rock or other material to be drilled.

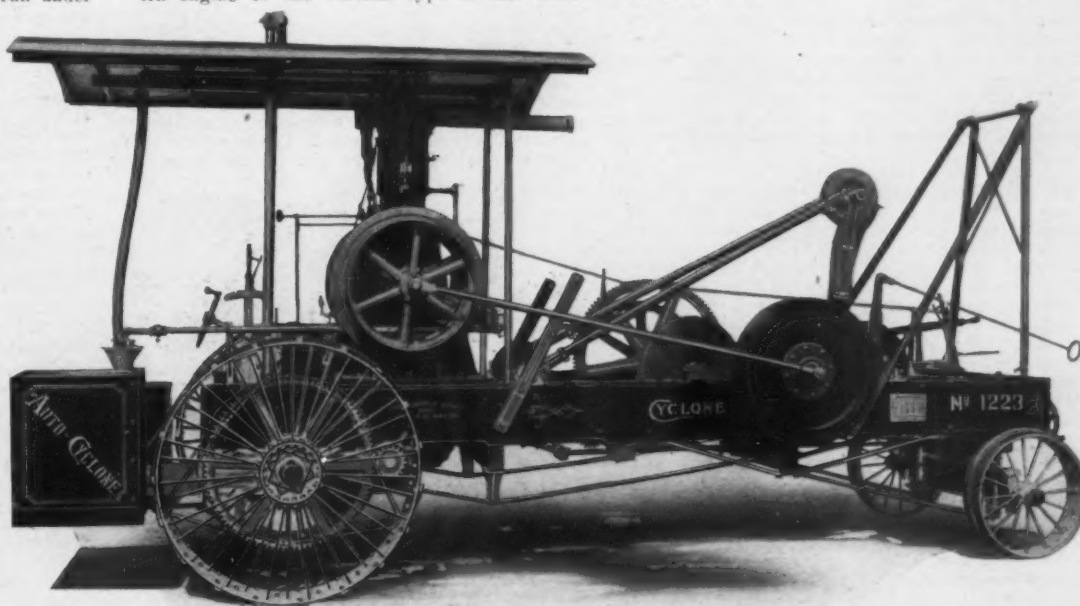
An engine of the vertical type is best suited

for drilling purposes, as the vibration of a vertical engine is in the same direction as the dropping of the tools, while the vibration of a horizontal engine tends to rock the drill and greatly interferes with the stroke of the tools, thus detracting from the efficiency of the drill. With the speed under complete control, a circulating pump for handling the water for cooling the cylinder, a perfect igniting system and simple adjustment of mixture, gasoline engines are just as reliable as steam can possibly be.

The accompanying cuts illustrate a gasoline and also an electric drill, especially fitted and built for quarry work. They are compact, strong and substantially built, and the records which have been established in a number of limestone quarries by drilling more than 7' 6" per hour of 5 1/2" hole, is remarkable and gives this class of drill a place which was not thought of a few years ago. The many tests which have been conducted by a number of quarry people in the past two years have amply demonstrated the method of large holes and heavy charges as being the most practical proposition for producing stone in quarries where the face of the quarry is 12 to 15' or deeper.

In some of the larger quarries as many as ten well drills have been installed, dispensing entirely with the large tripod outfits.

One of the quarry man's greatest worries is producing the stone fast enough for the capacity of the plant; the well drills have solved this problem and eliminated the bad feature and a big item in the expense of production as it requires on an average 50 per cent less linear feet of drill hole and a considerable less quantity of explosive besides saving delays in waiting on available stone for the crusher.



## NEW CRUSHER PLANT.

Kansas City, Mo., Sept. 15.—The Kansas City Rock and Sand Co., of Kansas City, Mo., have commenced operations and are now supplying large quantities of special size of crushed rock in the Kansas City market. The new plant is located at Centropolis, a point in the eastern end of the corporate limits of Kansas City, located on the Kansas City Southern railroad. The entire plant was planned and built by the Allis, Chalmers Co. The equipment consists of a number of 7½ and a 4 Gates crusher with screens for all the various sizes from ¼-inch up to 3 inches. The quarry is equipped with Ingersoll and Rand drills and Western Wheel Scraper dump cars of 2 yards capacity—25 of them. The entire plant is operated with electricity and has a capacity of 1,200 yards of crushed stone per day. George Brindle is the superintendent and has general charge of the plant. The officers of the company are in the Victor Building. The officers of the Kansas City Rock and Sand Co. are A. P. Nichols, president; Joseph T. McGrew, vice president, and W. B. Taylor, secretary and treasurer.

Preston K. Yates, 30 Church street, New York, has been engaged by the New Jersey Trap Rock Company to remodel their plant, which was destroyed by fire July 21 last. The plant will be enlarged, and all the labor-saving devices introduced. It is expected to have the mill in operation before the season closes.

The National Mortar & Supply Company says that business is fair to good, although the limestone season will close about September 15th. It has been putting in some new machinery at its limestone plant at Gibsonburg, Ohio, and now has one of the finest equipped plants in the Buckeye State.

H. A. McCannon, David Eells and Cyrus Angle Meyer, of Lisbon, Ohio, have started work in the mammoth limestone plant there to give employment to 100 people. Orders are being placed for machinery to turn out 1,000 tons daily capacity, and contract for two kilns have already been let.

Pultney township (W. Va.) trustees held a meeting recently and awarded contracts for furnishing stone for pikes in the township. The following contracts were awarded: J. C. Baker, districts 1 and 2; M. S. Bailey, district 3; G. E. Rauchenberger, district 4; A. B. Alexander, district 5.

The Wheeling Limestone Company, of Wheeling, W. Va., is making commendable progress at their new plant east of Wheeling. They are turning out limestone in five sizes, ranging from the small size for top dressing up to the large size for road foundations.

The Standard Scale & Supply Co., of Pittsburgh, Pa., recently made shipment of ten carloads of scales and trucks for use at the new plant of Sulzberger & Sons Co., at Oklahoma City, Okla. This order, as well as the one for thirty-five scales—mostly 120-ton railroad track scales—for the Bureau of Water, Gas and Electricity of Brooklyn, N. Y., also recently shipped, are the largest orders for this class of goods that have been placed in recent years, and the selection of "The Standard" scales and trucks on these large orders demonstrates the merits of the goods manufactured by this company.

In the equipment for Sulzberger & Sons Co. were included a large number of special new pattern portable suspension scales with steel plate platform, which have recently been put on the market by The Standard Company. This scale eliminates the necessity of cutting the floor where the scale is placed, and it is only necessary to use an incline of two inches at each end to run on the platform. This type of scale is particularly desirable for users where the floors are damp and wet, as there is no opening to allow the water to run through to the floor below. Because of this advantage this scale is being adopted by various packing houses and other users throughout the country.

## BUSINESS IS GOOD.

Detroit, Mich., Sept. 18.—The Sibley Quarry Company reports its plant as running steady, and the prospects are of its continuing so through the winter. This company operates one of the largest, if not the largest, quarries in the country, and employs several hundred men. The quarrying extends over several acres and it is one of the points of interest about Detroit.

"We are running our plant as usual, and anticipate a continued good business through the fall and winter," said an official of the concern. "There is a good demand for stone products and contractors seem to be buying more in this line with each succeeding season."

## QUARRIES IN ILLINOIS.

Springfield, Ill., Sept. 18.—The city of Aurora has ordered ponds at quarries fenced as the result of the accidental drowning of a child.

Hanley & McDonald of Chicago, who have a lease on the old Garden City Sand Company pits on the Great Western line near St. Charles, have installed crushing machinery for the purpose of doing a business in crushed rock. Henry M. Young, of St. Charles, is superintendent.

## PITTSBURGH QUARRY NEWS.

Pittsburgh, Pa., September 18.—The limestone men are pretty busy. Quarries, however, had an exceptionally good year in furnishing limestone for good roads operations. The appointment of Edward M. Bigelow as Road Commissioner of Pennsylvania is helping along this industry a great deal, and the quarries do not expect the same dull times that they usually have in the winter. Nearly every plant in western Pennsylvania is running now to full capacity.

The Kramer Quarry Company has been organized at DuBois, Pa., by M. I. McCreight, C. C. Hartman and John C. Arnold, of that place, to quarry and mine sandstone, limestone and fire clay.

F. C. Thomas has opened a new stone quarry on the Hook farm, one mile south of Waynesburg, Pa. He has stripped a considerable area and has now a line of good bridge abutment stone, which he is furnishing along the line of the Waynesburg & Blacksville Street Railway Company.

Houston Brothers Company are running their agricultural lime plant full and are receiving heavy shipments of stone every week. This is now one of the most satisfactory branches of their big business.

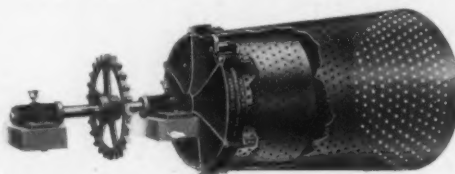
The Manufacturers & Contractors' Club of Pittsburgh held its first meeting after the summer vacation in the Lewis Block, September 12th. It decided to place at the disposal of the new Industrial Commission a committee to assist in the development of Pittsburgh industries. On this committee was appointed T. S. Morgan, Joseph A. Weldon, C. P. Hill, G. W. Danforth, of the Jones & Laughlin Steel Company, and Louis Brandt, of the Nicola Building Company. The club will meet on each Tuesday.

## THE IMPROVED GILBERT SCREEN FOR WASHING GRAVEL.

## Patents Granted.

As the demand for clean gravel and sand for concrete work is increasing more and more, new plants are constantly being erected throughout the country, it is found that the old type cylindrical screen on an inclined axis, which is usually used for dry screening, is rather more cumbersome than necessary for the wet screening. For this purpose the Gilbert screen was developed and during the past few years it has been adopted by the majority of these plants.

This screen is conical in shape, entirely open at one end, and it is supported on a horizontal axis. This allows a chute to deliver the gravel and water to the extreme interior of the screen; and the material thus agitated by the revolution of the



screen works its way out against a jet of water and is thus thoroughly washed and screened.

Certain improvements have recently been made that will undoubtedly be of considerable interest to those who have had occasion to use this screen. These improvements are planned to save a great deal of the wear on the perforated screen plate and also provide a means of quickly removing or attaching the plate.

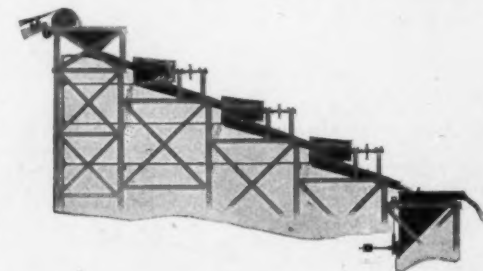
The construction of the screen provides a cast-iron spider supported at one end of a shaft. To this spider and overhanging from the shaft, there is fastened the conical perforated plate. In the

original screen, this plate was bolted directly to the spider. When it was necessary to change the plate on account of wear or to get a different size of screenings, it required considerable time. Under the new arrangement of the screen, six angle clips riveted to the plate are placed opposite six lugs cast onto the spider. Bolts through both the clips and lugs hold the plate securely against a ridge on the spider, and in this way the plate is absolutely rigid but at the same time, it can be easily removed and a new plate attached to the spider very quickly.

Another improvement reduces very materially the expense of plate renewals by relieving the screen from the impact of the material from the chute. In this type of screen, as was explained, the material is delivered onto the inner end of the screen near the spider and there is consequently the greatest wear at this point. In order to take this wear a small inner screen or skirt is provided about one-third the length of the outer screen plate and of small diameter; this is fastened to the spider in the same way just inside of the larger screen. The perforations in this plate are the same size as those in the outer plate so that material passing through this plate drops on immediately through the outer screen with no chance of becoming lodged between the two. As a further precaution against clogging, it is arranged that the distance between the outer and inner screen is slightly greater than the diameter of the perforations so that anything that can possibly get between the two plates, is free to roll out.

The screening operation with this inner plate is the same as without, the "fines" immediately pass through and the "overs" pass on out of the large end of the screen. The wear on the outer screen plate, however, is reduced to about one-quarter and the expense of renewals need only include the cost of the inner screen plate, which is easily renewed.

The Gilbert screen has proven to have much greater capacity than a cylindrical screen with the same screening surface. It requires but one-quarter



the power necessary for a cylindrical screen of like capacity, the initial cost is lower, the upkeep is less and the separations are much cleaner because of the jet of water forced against the material at its discharge end which keeps back the small product and forces it through the perforations.

With the present demand for clean gravel for concrete work most screening plants that are being erected are equipped with the Gilbert screen, and arrangements made to thus wash the material. The fact that the gravel may be thoroughly washed while it is being screened, and at no additional expense makes this screen particularly valuable for such plants. In hundreds of instances, plants equipped with these screens and with automatic settling tanks for saving the sand, are thoroughly separating the clay and loam from an otherwise low grade gravel.

The Stephens-Adamson Manufacturing Company, of Aurora, Illinois, are the manufacturers of this screen and they hold the patents on the screen and on the two improvements described.

## TERRE HAUTE COAL &amp; LIME COMPANY.

The Terre Haute Coal & Lime Company, of Terre Haute, Ind., is one of the most up-to-date and wide-awake firms in the country. The company handles coal and all kinds of building materials. The business amounts to \$60,000.00 a year. A. E. Bradshaw, of the Indianapolis Mortar & Fuel Company, after an examination of the yard of the Terre Haute company, said that it was the most up-to-date yard he had ever seen and among the best in Indiana.

The Ceresit Waterproofing Company, Chicago, Ill., recently shipped 10,000 pounds of Ceresit waterproofing to Los Angeles, California, to be used for waterproofing the foundations of the new Times Building. This building is being erected to take the place of the one which was blown up recently.





## Association of American Portland Cement Manufacturers

Meets Semi-Annually.

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### Executive Committee

### THE CEMENT SITUATION.

The increase in the use of cement has been very marked during the past thirty days. There are a great number of projects which are being rushed to completion before the bad weather sets in, and these, together with a number of new operations, have caused the cement companies to work overtime in making shipments.

Despite the fact that there is hardly a cement company in the United States but what has had a good trade during the early fall, prices remain practically unchanged. In fact, in some localities they are more "wobbly" than ever before. Some of the companies have had their entire surplus stock swept away by the tremendous rush of business, while others, who had their bins full almost to the bursting point, were enabled to get rid of a little of their surplus stock and relieve the situation to some extent. The retailers of builders' supplies have been laying in their usual stocks, but there does not seem to be any feverish haste to do so, as some of them are not satisfied that the market will improve.

We look for an early change in the price of cement, as the present rush of business will have its effect sooner or later.

### INCREASES CAPACITY.

The Piedmont Portland Cement Co., of which J. C. Bass is president and W. H. Davis secretary-treasurer, is now installing additional machinery in its plant at Portland, Ga., to increase the present capacity by 250 barrels per day. The stockholders of this company, at the regular annual meeting held in July, authorized the sale of enough additional stock to make this increase, and capital was readily found. This increase will give the Piedmont company a daily capacity of 1,500 barrels.

The Piedmont Portland Cement Company has established selling offices in Atlanta, with Kendrick & Tucker in charge, the offices being located in the Candler building, named in honor of Asa G. Candler, president of the Coca Cola Company.

### HEAVY VOLUME OF SMALL SALES.

The Dixie Portland Cement Company, which manufactures Royal Portland Cement at Richard City, Tenn., and the general sales offices of which are located in Chattanooga, Tenn., have established branch sales offices in Birmingham with The Fulenwider Building Material Company, of which Robert Fulenwider is president, in charge. The Fulenwider Company reports an active market and heavy volume of small sales, though, owing to certain tendencies of the market, no unusually large orders have been booked. The Fulenwider Company is also sales agent for Monarch Plaster, made by the Monarch Plaster Company, of Wadonga, Okla.

### CEMENT COMPANY MAKES IMPROVEMENTS.

El Paso, Texas, September 18.—The Southwestern Portland Cement Co. will make improvements at its plant here costing \$12,000, consisting of a boarding and rooming house, for the accommodation of the men employed at the plant, and a modern office building, both to be of reinforced concrete and costing \$6,000 each.

The boarding and rooming house will have fifteen rooms, a large dining room and a kitchen. The office building, which will be for the use of the officers of the company, will be one story high and will be situated opposite the cement plant. Construction work will be begun this fall on the new buildings. The company is also installing a water purification plant costing \$3,500 for purifying the water from the Rio Grande. It will be built of concrete and the water will be treated by a mixture of lime and lime sulphate, to remove the mud and organic matter.

### SECURES LARGE CONTRACTS.

The Standard Portland Cement Company, which has its plant at Leeds, Ala., secured a contract for 100,000 barrels of Standard cement from the Hardaway Contracting Company, Columbus, Ga., early in September, making a total of 135,000 barrels of Standard brand sold to the Hardaway company for one project. The project for which this heavy contract was placed is the great dam at Goat Rock, on the Chattahoochee River, near Columbus, Ga. The dam and power plant is being constructed for the Columbus Light & Power Company, and Stone & Webster Engineering Corporation, of Boston, Mass., are the engineers in charge.

A number of other important contracts have been sold by the Standard Company, of which J. I. McCants is sales manager, among which are noted the following, recorded in the past few months:

Birmingham—Y. M. C. A. building, 4,000 barrels; Tennessee Company, 85,000; Woodward Company's by-product plant, 8,000.  
Montgomery—Masonic Temple, 2,000; electric light power plant, 3,000.  
Atlanta—Capital City Club, 4,000; Imperial Hotel, 2,500; Journal building, 3,000.  
Columbus—Columbus Power Company, 50,000; City of Columbus, 20,000.  
Memphis—Kalleher building, 6,000.  
Rome—Shorter College, 6,000.  
Pensacola—County jail, 5,000.  
Corey—American Steel & Wire Company, 15,000.  
War Department—For Warrior River improvements, 6,000.  
City of Cullman, 5,000.  
Auburn—University building, 2,000.  
Tuscaloosa—University building, 3,000.

### INTERNATIONAL BUREAU OPENED.

Dr. Otto Schott, the well-known consulting engineer and technical chemist, has opened the International Bureau of Consultation for the Cement Industry. The offices will be in the Fifth Avenue Building, New York City. In the prospectus just issued the purposes of the bureau are set forth in full. It says in part:

"The International Bureau of Consultation for the Cement Industry has been established for the benefit of the Cement Factories in the various industrial countries all over the world.

"This bureau has for its purpose to keep the cement manufacturers in touch with the progress of this industry in every single country.

"The designation 'International' in the title of the said bureau implies that we conduct the business on an international basis by bringing about an exchange of experience and improvements in the manufacture of cement in the different countries.

"Through our consulting bureau the cement manufacturers will be afforded an opportunity of getting acquainted with all methods used in cement making, thereby gaining the great advantage of mutual instruction.

"The experience and knowledge acquired in Europe, where the manufacture of cement is in a high state of development in general, will prove of the greatest advantages to such countries in which this industry is yet relatively new, or in its infancy.

"The International Bureau of Consultation will make it its special business to remain constantly in touch with the latest improvements and inventions in this line."

The holdings of the Minona Portland Cement Co., which was recently ordered dissolved by Judge J. W. Mabry, of the city court, Selma, Ala., are being advertised for sale, and as soon as satisfactory bidders are secured the stockholders of the company will be reimbursed dollar for dollar, so it is stated. A plan for the reorganization of the company is now being given attention and it is understood the Board of Trade of Selma, near which city the raw material is located, has offered a rich bonus to stimulate interest in the matter.

Preliminary plans have been drawn up by the Ruggles-Coles Engineering Company for a cement plant at Matansa, Cuba.

### CHARLES N. WILEY BECOMES SUPERINTENDENT.

Birmingham, Ala., Sept. 18.—Chas. N. Wiley, for the past eighteen months, up to August first, chief chemist of the Atlantic & Gulf Cement Co., of Ragland, Ala., has been appointed superintendent of the plant, succeeding M. W. Shaffer.

Mr. Shaffer retains his connection with the company, it is announced by the J. D. Kirkpatrick Sand & Cement Co., of Birmingham, which is sole sales agent for the Coosa brand of cement made by the Atlantic & Gulf Co., but in future Mr. Wiley will serve as chief of the operating staff as well as of the chemical department.

Mr. Wiley was for a number of years chief chemist of the Southern States Portland Cement Co., of Rockmart, Ga., and both during that period and since he has been with the Coosa-brand people has maintained an exceedingly high reputation both for his ability and for the quality of output.

Enlargements and improvements on the Atlantic & Gulf plant approximating \$125,000 have just been completed, so it is stated by Mr. Wiley, giving a daily capacity to the plant of 2,400 barrels, an increase badly needed by the sales department, as M. H. Blanchard, sales manager, states the orders now booked are sufficient to require "overtime" for many months to come.

Mr. Wiley furnishes the following details of the improvements made:

The stone storage (capacity 5,000 tons of crushed limestone) will be equipped with belt conveyors, making all handling from crusher to scale bins mechanical. This stone storage will be in use in a few weeks. The clinker storage will have a present capacity of 50,000 barrels, and is so arranged that a 25,000-barrel extension can be constructed at little expense. A Jeffrey pan conveyor will be used for carrying hot clinker from kilns to storage. A belt conveyor in tunnel under storage will carry seasoned clinker from storage to mill bins, provision being made en route for weighing and adding gypsum. The new machinery consists of two rotary kilns, 125 feet long and 9 feet in diameter, and three installations of five grinding units. Each of these consists of two Allis-Chalmers pulverizers, Newago screen and tube mill equipped with cypelb improvement. This equipment will be used for pulverizing clinker. The Fuller Lehigh mills used for this purpose will be placed in the raw grinding department. A large portion of new machinery is on the ground and being set up. The baghouse, 40x70 feet, will be equipped for handling 15,000 bags per day. Its construction will be steel and concrete, the walls being of plaster on expanded metal lathing to conform with surrounding mill buildings. The laboratory building, 30x45 feet, will be two stories, basement being devoted to physical testing and second floor used for chemical laboratory. Basement will be half under ground, so that a more uniform temperature can be attained in all seasons. Up to first floor the walls will be of concrete; both floors of concrete. Floor of chemical laboratory will be reinforced and supported on concrete beams. A matched wood floor will be laid on top of this. Remaining walls will be constructed by nailing inch boards diagonally to studding, affixing expanded metal lathing on both sides and plastering. This building will be absolutely fireproof, and will contain many original forms of equipment. A number of five-room cottages will be built, to conform in design to those already erected.

### SAN FRANCISCO CEMENT NEWS.

San Francisco, Cal., Sept. 18.—Cement manufacturers operating in the district around San Francisco express the opinion that conditions in the industry on the Pacific coast are considerably better than in some other parts of the country, but admit that their sales so far this year leave much to be desired. This condition can only be explained by the continued absence of large individual orders from private corporations, which were expected to require a heavy tonnage. Requirements for public works appear to be about normal, though work has been delayed on quite a number of important projects. The amount of cement required for building purposes is also fully as great as for several years past.

Regarding shipments of cement from California mills to Oregon and Washington, the sales manager of a local firm says that the movement is keeping up to about the former scale, and is likely to continue large for an indefinite time to come. Notwithstanding the fact that great improvements are being made in one of the northern plants, and one entirely new mill is to be erected shortly, he believes that there will still be room in the north for a large tonnage of the California product.

### A CONTRAST OF EFFICIENT AND INEFFICIENT MACHINES IN A CEMENT PLANT.

When one stops to consider seriously the fact that the average fuel consumption of coal-fired cement kilns throughout this country is about ninety pounds of coal per barrel of clinker, or about 100 pounds of coal per barrel of finished cement, he is at once struck with the inefficiency of the present type of rotary kiln that performs the clinkering operation, and is surprised to find that more fuel engineers have not considered this question worthy of attention, especially when one considers that a saving of ten to fifteen pounds of coal per barrel of clinker would result in the saving of three-quarters of a million dollars annually to the cement industry.

It is stated that where the cement rock and dry process are used the net heat necessary to obtain the desired chemical reactions can be supplied by the combustion of about 16 pounds of average long-flame bituminous coal per barrel of clinker form. Of course, this figure is increased where clay and the wet process are used, inasmuch as heat is absorbed in evaporating the water and decomposing the hydrated compounds. The difference between this figure, 16 pounds, and the 90 pounds, as referred to above, represents the loss due to sensible heat in the discharge clinker and chimney gases, as well as by radiation and conduction from the kiln shell.

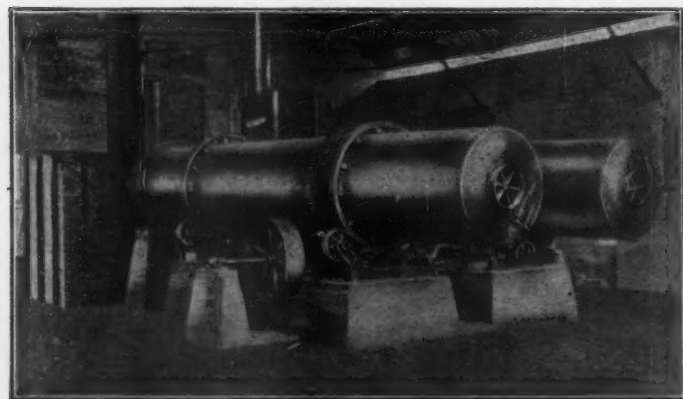
The attempts which have been made to reduce the heat losses of the kiln have only been recently made in this country, while in Germany cement manufacturers regenerate the heat in the discharge clinker by passing it through an under cooler and preheating the incoming air to the kiln. Where this system is properly run, hundreds of tons of coal are saved per year.

In contrast with the inefficient rotary kiln might be mentioned the dryers which are generally used in the cement plants of this country. The most efficient type is the Ruggles, which consists of concentric shells, rigidly joined together but capable of revolution. The material as it is fed through the front head into the space between the two shells is picked up by lifting flights and dropped onto the inner shell. The hot gases are drawn by a fan through the inner tube and then pass back over the material between the shells, the direction of the gases and the materials being opposite. By this method all the causes of losses in efficiency which are principally due to unconsumed carbon, heat carried away by gases, radiation from furnace and shell, and the sensible heat carried away with the dried material, are reduced to a minimum.

These dryers are used for drying coal as well as cement rock; most of the cement plants use the same type of dryer for each process, but none of them use the same dryer. Pulverized coal is most widely used in cement burning and in order to dry the coal it must be previously ground. The cost of this drying, according to recent tests made on two Ruggles-Coles dryers at a cement plant, is \$.0195 per barrel of cement, while the efficiency of the dryer was 87.8 per cent in each case. It will at once be seen what a striking contrast this high efficiency is to the low efficiency of the rotary kilns, and it is to be hoped that efforts will be made to increase the efficiency of the kilns, as they are certainly worthy of attention. The figures of the tests on the Ruggles dryers used in drying coal at a cement plant are given in the following table:

#### Recent Test of Two Ruggles-Coles A-B Dryers Drying Coal at a Cement Plant.

Amount of coal dried 10 hours.....	162 tons
Amount per dryer per hour.....	8.1 tons



RUGGLES-COLES DRYERS.

Average moisture as fed to dryers.....	9.3%
Average moisture as delivered from dryers.....	.8%
Total fuel used per dryer per hour.....	1.8 tons
Average temperature of coal fed.....	62°
Average temperature of coal delivered.....	210°
Average temperature of external air.....	68°
Average temperature of exhaust from dryer.....	98°
EFFICIENCY FIGURED PER DRYER PER HOUR—	
Total material.....	16,200 lbs.
Total moisture in material.....	1,661 lbs.
Total moisture remaining.....	130 lbs.
Total moisture evaporated.....	1,531 lbs.
Heat necessary to raise temperature of material.....	510,300 B. T. U.
Heat necessary to raise temperature of water.....	249,150 B. T. U.
Heat necessary to evaporate water.....	1,483,682 B. T. U.
Total theoretical heat required.....	2,243,132 B. T. U.
Thermal value of coal.....	14,200
Theoretical amt. of coal required.....	158.1 lbs.
Actual amount of coal used.....	180 lbs.
Efficiency.....	87.8%
COST OF DRYING—	
1.8 tons of coal @ \$2.40.....	\$4.32
10 hours labor @ 17½¢.....	1.75
160 horsepower hours @ \$.006.....	.96
	\$7.03
TOTAL PER DAY—	
Cost per ton.....	.04
Cost per barrel of cement.....	.00195

### NEW YORK CEMENT NEWS.

New York, N. Y., September 12.—The local cement market during the past month has been as demoralized as it has ever been in its history.

The large cement concerns have reduced the price of cement five cents during the month, and are now quoting seventy-five cents in bulk at mill. The reduction was brought about by the poor demand for cement and the slashing of prices by the smaller companies, which have been selling cement at a low figure for some time past. Even at the present low quotation it is reported that they are still shading prices. Local members of the trade who are standing by their prices deplore these tactics, as they tend to demoralize the entire trade.

Dealers find themselves with large stocks bought on contract, to be taken up from time to time, for which they paid higher prices than those now quoted by the leading manufacturers. Dealers always contract for at least a part of their supplies around the opening of each year. During the first part of 1911 the larger cement companies were holding prices firm on the basis of \$1.20 to \$1.25 per barrel at the mill. From this point the market advanced five cents a barrel. This encouraged many to believe that a turn for the better had set in, and additional purchases were made by dealers on contract. But as time wore on it became apparent that the trade expectations of improved conditions were not being realized, under which prices gave way. They are now about \$1.10 to \$1.15 per barrel at the mill.

According to the Thompson-Starrett Co., builders of the Woolworth Building, 62,000 barrels of cement of the Atlas and Bath brands will be used in the construction of this building, which will be the highest in the world.

Dealers, however, are optimistic as to future business and look for a big improvement in the demand for cement during the next month.

Edward E. Buhler, Eastern agent for the Universal Portland Cement Company, said: "Throughout the country trade is good, but it is probably not as good as it should be in the city, except on subway work. I believe dealers are well supplied with material. I do not look for any change in prices. Wall Street's recent depressed markets have had something to do with holding up contracts."

S. Wells, manager of the New York office of the McCormick Waterproof Portland Cement Company, stated: "There has been a lull in business during the early part of September, but, taking it as a whole, the demand for our compound during the past month has been good. We have received a number of promising inquiries from out-of-town points and also from abroad. We expect to ship a quantity of our

waterproofing compound to a firm in England the latter part of the month. There has been a steady improvement in the demand for our goods, and indications are favorable for a good business during the balance of the year."

G. A. Molitor, of the Northampton Portland Cement Company, said: "The demand for cement continued slow during the past month, and at the present moment there are not favorable indications of any improvement in the situation. Collections are slow and hard to make. I know of dealers who would not start on any job unless they received a satisfactory amount of cash in advance, to be followed up with other cash instalments when called for. Portland cement is now quoted at 75 cents in bulk, at mill."

### LOUISVILLE CEMENT NEWS.

Louisville, Ky., Sept. 15.—For several weeks past it has been evident in local cement circles that the Louisville market could stand considerable stimulation in regard to prices. The cause of the unfavorable situation in this regard is said to have been the depressed status of the market north of Kentucky, which has had reactive effect upon the local field to an appreciable extent. At the time of writing everything looks extremely good in the cement trade of the Bluegrass. All the plants are running full time and are looking forward to an unusually prosperous season, in accordance with the record-breaking building prospects which exist.

The banner building year, in the modern era of concrete construction, has made a big impression upon the mind of the trade and everybody is determined to be prepared for unusually good business from now on. This development tending toward the enlargement of the cement industry in Kentucky is very gratifying to the trade, and is what the experts have been looking for a long time.

The big cement mill of J. B. Speed & Co. is running full time and is experiencing generally improved business conditions, according to Secretary-Treasurer Henry Gray. Mr. Gray said that the market locally had not been what it should be during the latter part of August and the first week or so in September, but that the middle of September brought about a gratifying change, tending toward higher prices universally. The outlook, comprehensively considered, is satisfactory, said the Speed executive. Some enlargements and improvements in the mills over at Speed's Station, Ind., are being planned.

The Kosmos Portland Cement Company is handling a fine amount of business, with the mills out at Kosmosdale, Ky., running full blast and chances very favorable for enlargement of the Kosmosdale interests to accommodate increasing business in the near future. The company is working upon several of the biggest building jobs which have yet been gotten under way in the Gateway City. The 10-story office building of the Falls City Construction Company at Center and Jefferson streets, the addition to the 10-story Weissinger-Gaulbert apartment building at Third avenue and Broadway, the Peaslee-Gaulbert warehouse annex, the big bridge over Salt river at West Point, Ky., and the new powerhouse of the Kentucky Terminal Traction Company at Lexington are being erected with Kosmosdale stock.

It is reported that Ohio capitalists are forming a syndicate for the purpose of leasing some valuable cement lands and establishing an up-to-date plant of considerable capacity near Harrodsburg, Ky.

The Riverside Portland Cement Company, Riverside, Cal., has been operating the latest addition to its plant since August 3 on a 24-hour schedule. The equipment consists of four kilns, four grinding mills, five tube mills and other machinery, installed since the first of the year at a cost of about \$325,000, and bringing the expenditure for the past twelve months to about \$500,000. During the coming year, it is announced, further additions will be made to the amount of \$225,000.

R. Richards, of the Olympic Portland Cement Company, announces that the construction of its new plant at Bellingham, Wash., will be started immediately.

The Tuscaloosa (Ala.) Concrete & Supply Company has secured contract to lay the foundation for a new \$50,000.00 fertilizer mixing plant for the Tuscaloosa Cotton Seed Oil Company.

The rock-crushing plant of the Big Rock Stone & Construction Company, near Little Rock, Ark., was recently destroyed by fire which entailed a loss of \$100,000. W. W. Dickinson is president of the company.



CHICAGO CEMENT NEWS.

Chicago, Sept. 21.—Cement manufacturers here are very much elated over the prospects for a good fall demand. Business has improved a great deal since August and shows signs of continuing to do so. The new building ordinance of Chicago, which went into effect the first of this month has been a noticeable factor in causing the demand to increase. The new code provides that buildings shall not be erected higher than 200 feet; formerly the limit was 260 feet.

Many builders filed their plans and started construction work on their buildings so as to get the benefit of the old code and a decided impetus was given to the cement trade in this manner. All of the new buildings, of which there are nearly fifteen to go twenty-two stories, will use considerable cement and many large orders have already been placed for the material.

Two permits, one for a 16-story building and one for a 7-story addition to a building completed a few months ago, were issued shortly before the new law went into effect. Charles A. Stevens & Bros. secured a permit to erect a \$1,600,000 structure on the site of the present State street store. A permit for an addition to the Karpen building, to cost \$650,000, was also issued. It is estimated that 25,000 barrels of cement will be used in these two structures alone.

Other permits for the following buildings were issued about the same time:

The Continental and Commercial National Bank Building, La Salle, Quincy, Adams streets and Fifth avenue, 260 feet high, to cost \$7,000,000. D. H. Burnham & Co., architects. Fifteen thousand barrels of cement will be used in this building.

The Marshall Field Estate, office building No. 1, Wabash avenue and Washington street, 21 stories high, to cost \$2,000,000. D. H. Burnham & Co., architects. Ten thousand barrels of cement will be used.

The Marshall Field Estate, office building No. 2, Washington and Clark streets, 21 stories high, to cost \$1,600,000. D. H. Burnham & Co., architects. Five thousand barrels of cement will be used.

Henry C. Lytton, store and office building, State street and Jackson boulevard, 19 stories high, to cost \$1,600,000. Five thousand barrels of cement will be used.

Chicago, Burlington & Quincy Railroad office building, South Clinton street and Jackson boulevard, to cost \$1,500,000. This building will be 19 stories high and it is estimated that it will employ 50,000 barrels of cement in its construction. Marshall & Fox, architects.

The Boston Store addition, State and Madison streets, 17 stories, to cost \$1,000,000. Holabird & Roche, architects. Ten thousand barrels of cement to be used.

The Morrison Hotel, Clark and Madison streets, 20 stories high, to be the largest hotel in Chicago, and to cost over \$5,000,000, will use about 25,000 barrels of cement.

The Kesner office building, State and Quincy streets, 21 stories high, to cost \$1,500,000. Five thousand barrels of cement to be used.

Besides these enormous amounts of cement that will be used in building construction this year there have already been used in this city 360,000 barrels of cement in street work and improvements. When projects like these are on the docket there is sure to be little fear that the trade will not be up to standard in the future. Prices have shown themselves to be in sympathy with the general advance of business, and have improved somewhat in the past month.

No such activity has been noticed in the building world of Chicago for many years. The downtown district and the outlying districts have all been in a turmoil, and it bids fair to continue.

The Marshall Field Estate is also putting up a new Field Museum, to take the place of the old museum erected for the Chicago World's Fair, and this building will use a large quantity of cement before it is completed. Stanley Field, of Chicago, is president of the board of trustees in charge of the project.

The Lehigh Portland Cement Company reported business good and prices better than last month. This company has had representatives covering the Columbus Fair and the Indianapolis Fair, which were recently held. The following salesmen were present at the fairs: J. L. Cooper, who travels in eastern Ohio; B. F. Andrews, who travels in western Ohio; H. L. Scott, southern Indiana; D. M. Adams, northern Indiana. S. B. Chittenden, Jr., advertising manager of the Lehigh Company, was in attendance at both of the fairs.

The following is a list of new salesmen recently put on by the Lehigh Company: S. Alden Smith, to travel in Illinois; A. Murray Jones, C. O. Reagin,

Hugh E. Wallace, T. B. Hemmick, J. J. Kehoe and F. C. Bailey, all to travel in the northwestern territory to cover the new Mason City (Iowa) plant. W. H. Eccles, formerly traveling in Illinois, will now travel in the northwestern territory.

B. F. Affleck, of the Universal Portland Cement Company, stated concerning conditions: "Business is good in Chicago, and the city trade is looking up in fine shape. Dealers are moving their stocks, and, but for the few days of rainy weather, trade has been very good. Prices in Chicago and the surrounding territory have advanced, and prospects are bright."

George W. De Smet said that the trade was in good shape. Much cement had been used in street improvement work, and the number of new buildings going up warranted the statement that there would be a steady demand for cement this fall.

D. Richter, Chicago representative of the Alpha Portland Cement Company, is on a two weeks' trip through Ohio on business for the company. The business of this company has been good, and prospects are excellent for a continued demand.

H. J. Hill, formerly with the German-American Portland Cement Company, is now chief inspector of supplies for the United States Government in the Philippine Islands.

Edward L. Cox, Chicago manager for the German-American Portland Cement Company, stated concerning conditions: "Business is much better this month. Prices have advanced about twenty cents a barrel in some localities. Dealers' stocks are moving well and the general outlook is hopeful. Much cement will be used in Chicago this fall, and the city trade is going to be very good."

The Marquette Cement Manufacturing Company, of which Gold Williams is sales manager, reported business good, as it has been with them for some time. The demand is improving and the outlook was reported bright.

The Lehigh Portland Cement Company has recently issued two very valuable booklets. One the Greater Memphis bulletin, containing many items of interest about Memphis, and the other The Modern Farmer, which should be invaluable to the farmer who is going to use cement in any construction on the farm. These books can be had free of charge by addressing the Lehigh Portland Cement Company and mentioning this paper.

Figures on the amount of cement to be used in the proposed subway in Chicago will probably be made public in another month or so. While no definite estimate can at this time be given, it has been approximated that the first operations will consume 1,000,000 barrels of cement, and as the subway will be building for the next fifty years or more, there is hardly any limit to the amount of cement that will be needed.

Sidney T. Sjoberg, M. E., representative of the McCormick Waterproof Portland Cement Company, of Chicago and St. Louis, stated that the demand for McCormick Waterproof Cement was rapidly increasing. He said:

"The proposed Field Museum will use up about 30,000 barrels of waterproof cement, and the Link Belt Company is building several coaling stations throughout Iowa which will take about 500 barrels apiece."

"The Washington street pumping station, which was built with McCormick waterproof cement, is in fine shape, and no leaks are visible. The engineer on this job said if the old method of waterproofing had been used the station would have looked like a swimming pool. The La Salle street tunnel, also built of McCormick cement, is holding up without a single leak."

Mr. Sjoberg said that he gets inquiries from people in every part of the United States who have seen the McCormick advertisement in Rock Products.

J. U. C. McDaniel, of the Chicago Portland Cement Company, stated: "The demand is very heavy and the output of most mills is contracted for, so that at this time the trade is in fine shape. The price in Chicago is much better than some months ago, and the increased demand will probably continue until the last of October. They are using 30,000 barrels of Chicago 'AA' in the new Mandel Building. Prospects are fine. Street paving work and building operations always go rapidly ahead at this time of the year, and cement has an abnormal demand."

W. T. Choller, manager of the Western sales department of the Atlas Portland Cement Company, stated: "Business is good and prospects are bright. Prices have improved some during the past month."

The strike of the plumbers and steamfitters in Chicago, due to trade disagreements between the two different unions, has been amicably settled, and architects and builders are, for the first time in six or seven months, finding themselves able to go ahead with their operations without fear of controversy.

CEMENT ABROAD

Interesting Facts and Figures on the Cement Industry in Foreign Lands Furnished by Resident Consuls.

AUSTRIA-HUNGARY.

(From Consul Joseph I. Brittain, Prague, Bohemia.)  
Within the last eight years large quantities of cement have been used in Prague and the vicinity in the construction of river improvements and buildings of various sorts. The former work has consisted in the construction of a harbor with a concrete bottom, about 3 miles from Prague, at a cost of more than \$500,000. In addition there have been constructed twelve dams and locks with retaining walls, and a water-front wall 3 miles long. In the building of these an immense quantity of Portland cement has been used. At present there are being erected business buildings and apartment houses in various parts of the city, in the construction of which cement is largely used.

Prague, however, is a center for the manufacture of Portland cement. On two sides of the city there are immense deposits of rock used in the manufacture of cement and also unlimited quantities of excellent limestone. Labor is very cheap, as both men and women are employed in the quarries, and coal is mined within 15 miles of the city.

Aside from Portland cement there are manufactured here large quantities of what is known as schlacken cement, which is made from pulverized furnace slag. This is largely used in the construction of work above water level. The annual production of Portland cement in Bohemia is 231,000 metric tons (metric ton equals 2,204.6 pounds) and of schlacken cement 60,000 tons. Portland cement wholesales at \$8.93 a ton and schlacken cement at \$8.44 a ton.

White Portland cement is not made in Bohemia, but comes from Stettin, Germany, and sells at \$86.54 a ton here. This cement is used in making ornaments of a permanent nature for decorative purposes, as those made from calcined plaster are not so durable. Many of the city buildings have outside ornaments consisting of various figures. These are usually made by mixing white and gray cement. Calcined plaster is imported from Thuringia, Germany, and sells at \$7.12 to \$10.18 a ton, according to quality.

HUNGARY.

(From Consul General Paul Nash, Budapest.)  
The use of Portland cement in Hungary is almost universal. In practically every building throughout the kingdom it is employed for concrete foundations, artificial stone work, and to a large extent, for roofing tiles. In Budapest itself very little real stone is now used in construction, doorsills, window sills, stairs, floors, etc., being made of cement. The buildings themselves are constructed of brick and covered with cement in imitation of stone. Re-enforced concrete pillars and girders are also very much used and concrete forms the foundation for all sidewalks and for most of the street pavements. The enormous amount of building which has been going on for the past three years has resulted in the establishment of a number of new cement plants, and although there is said to have been an overproduction in 1909 the production of 1910 is estimated at more than 7,000,000 metric quintals, or 688,947 long tons. Hungary produces considerably more cement than she consumes, and the exports of 1910, \$265,550 in value, exceeded the imports by \$76,116. The imports, valued at \$189,434, practically all came from Austrian factories, and, in view of the fact that there is no customs duty levied on Austrian products, these are apparently the only foreign plants which can successfully compete with the home industry.

The ruling wholesale price of first-quality cement is 4 crowns per metric quintal, or about \$0.37 per 100 pounds. The import duty amounts to 1 crown per metric quintal, or a trifle more than \$0.92 per 100 pounds. With these prices plus duty and freight to contend with, and in consideration of the really high degree of excellence of the Hungarian cements, it will probably be difficult for American concerns to do any business here.

FRANCE.

(From Consul James E. Dunning, Havre.)  
By far the largest part of the cement used in Havre and district comes from Boulogne and the surrounding country, where an excellent article—a perfect imitation, for all practical purposes, of the English Portland cement—is made at very low prices.

This Boulogne cement is of the slow-setting variety and is sold f. o. b. Boulogne at 25 to 24 francs (\$4.44 to \$4.63) per metric ton of 2,204.6 pounds. Freight by steamer from Boulogne to Havre averages \$1.16 per ton. The net price f. o. b. Havre is, therefore, \$5.60 to \$5.79 per ton. Freight by rail from Boulogne to Havre is \$1.73.

Rapid-setting cement used at Havre comes from the Department of Cote d'Or and from central France. The average price quoted f. o. b. departure station is \$7.04 per ton. Freight by rail to Havre is \$2.60 per ton. White Portland cement is unknown here. For facing buildings and ornamenting them a special variety of stone-powder plaster is used, the cost of which f. o. b. Havre is \$11.57 per ton.

Unless unusually low prices can be quoted, it will be difficult to find a market here for American cement, owing to high freight rates and prohibitive duties, the latter being \$1.74 per ton for slow-setting and \$1.16 for rapid-setting cement. Attempts have been made to introduce English and Belgian cements, but in spite of being favored with minimum rates amounting to \$1.16 for slow-setting and \$0.77 for rapid-setting cement, they were not successful.

As French rapid-setting cement is sold f. o. b. Havre at \$9.64 per metric ton, and as the freight from America to Havre is \$2.80 per ton and the duty \$1.16, the American port price should not exceed \$5.68 if an American firm wishes to enter this market with any assurance of success. Similarly the American port price of white Portland cement should not exceed \$7.61, as the French article sells at \$11.57. Freight and duty on slow-setting cement, \$4.54, is within \$0.09 of the price of the French material.

## GERMANY.

[From Consul General Robert P. Skinner, Hamburg.]

The prospect of introducing American cement in Germany is not very alluring, inasmuch as the cement industry of this country is older than that of the United States and is already in a highly developed condition.

The exports of German cement amounted to 725,355 metric tons in 1910, against 611,892 tons in 1909. The value of the cement exported in 1910 was 22,640,000 marks (\$5,388,320), as against 19,948,000 marks (\$4,747,624) in 1909. While German exports of cement to the United States have fallen off in recent years, the exports in 1910 were 14,110 tons, and in 1909, 34,520 tons. A significant fact is that in 1910 the German exports of cement to the Philippine Islands amounted to 5,097 tons and in 1909 to 1,799 tons.

In Germany there are but few cement works with a capacity of less than 100,000 barrels per annum, and as the producing capacity is said to be considerably greater than market consumption, the output per factory is frequently very much reduced. According to one authority, the cost of manufacturing cement in Germany is generally about 1.20 marks (\$0.285) per barrel, exclusive of coal and packing. Coal consumption is figured at about 130 pounds per barrel of cement. The cost of fuel is much more important than the cost of labor, which is unskilled and is figured at about 7 cents per barrel. For the creation of a cement plant this expert calculates about 25 cents per barrel per year as necessary for interest and amortization. In 1878 there were 29 cement works in Germany, producing annually 24,000,000 normal barrels; in 1902 there were 82 works. In 1909 over 142 barrels were in operation, with 164 plants, the capacity of which was about 43,500,000 barrels of Portland cement, 3,200,000 barrels of iron and slag cement, and 800,000 barrels of Roman cement. In the same year the total actual production was 33,000,000 barrels, equal to 5,600,000 tons.

## Packing—Artificial Cement.

Portland cement in Germany is packed in ordinary barrels of 180 kilos (397 pounds) gross weight and 375 pounds net weight, and in half barrels of 198 pounds gross and 185 pounds net. It is becoming more and more common to pack the material in bags of 154 and 110 pounds net. Losses in single weights up to 2 per cent are not objected to. Empty barrels and bags must be kept carefully and are taken back at reasonable prices. The excellent paper bags now in use in America are said to be too expensive for Germany.

Dr. E. Glinzer, the director of the State Building School in Hamburg, in his textbook of 1910, after characterizing Portland cement as that but little artificial cement is being manufactured from mixtures of slag flour, clay, slate flour, basalt, ashes, sand, etc. According to the rules of the German association the slag cements are of inferior quality and are not allowed to be put on the market as Portland cement. Other additions permitted are gypsum (not more than 2 per cent at the most), a normal coloring substance such as coal powder and a. ownstone for black, ultramarine for blue, and iron for red, but this latter must be absolutely free from sulphuric acid. Methods of producing magnesia cement are protected by German patents Nos. 142,933, 151,947, 110,129, 178,013 and 180,448.

## Portland Cement in Saxony.

White Portland cement is employed to a very limited extent in Saxony. It possesses certain advantages in stucco work, especially where there is exposure to wear; the balustrades in the Hygienic Exposition at Dresden are made of the white cement. While of admitted value for decorative work, builders in this region find that they can secure practically as good results, and at less expense, by using the composition known as terra nova.

Local builders and contractors are of the opinion that foreign cement can not be marketed successfully here, as it is heavily handicapped by freight charges and duties. Chemnitz contractors pay for the best quality of Portland cement, 41.13 marks (\$9.79) per metric ton of 2,204.6 pounds. A fair grade used for most ordinary purposes cost \$6.66 per ton. It is said that manufacturers make slight profit on this grade.

## UNITED KINGDOM.

[From Consul Horace Lee Washington, Liverpool.]

Cement is used in Liverpool chiefly in dock construction and for making foundations for the granite "sets" used for paving the roads. It has also been extensively used in the construction of the framework of high buildings (the Hennebelle system), where, instead of steel girders, a skeleton pillar is made of steel bars and stirrups, around which is built a wooden mold, and the concrete is poured in through the top and allowed to set. Several of these buildings have been built in Liverpool.

The prices of cement were very low a few years ago, but owing to the increased consumption at the present time they have much increased. The chief cement manufacturers are located in London.

There is a Belgian natural cement on the market, but it is very little used. It is regarded as of poor quality and is used where great strength is not required and also where the builders are operating on a cheap piece of work. The price of this cement is \$6.56 per ton.

The cement having the largest sale in this country, and one that is used by the government, is manufactured in London. The price is \$9 per ton, delivered in Liverpool, in bags of two hundredweight (224 pounds) each. The bags cost 26 cents each extra, and 24 cents is refunded upon return.

The British manufacturers guarantee that their Portland cement conforms to the British standard, which is approximately as follows: 60 per cent lime, 5 to 10 per cent alumina, 20 per cent silica, and small quantities of alkalies, oxides, etc.

The following is a copy of a typical British war office specification:

"1. The cement to be Portland, and to be fine enough to pass a sieve of 2,500 meshes per square inch without leaving more than 10 per cent behind.

"2. When made up neat and filled into a glass bottle or similar article, and struck level with the top, it must not in setting crack the vessel nor rise out of it, nor become loose by shrinking it.

"3. When made up neat and made into molds it must, after seven days immersed in water, be capable of maintaining a breaking weight of 400 pounds per square inch of section, and when made into cakes one-half inch thick, and after immersion any length of time, show no signs of cracking, swelling or shrinking. The immersion in water to commence as soon as the cement blocks can be removed from the molds, which must not exceed 24 hours after the mold has been filled."

The exports of cement from the United Kingdom to the United States amounted to \$816,123 in 1907, \$89,474 in 1908, and \$81,981 in 1909. Belgium shipped cement into the United Kingdom to the extent of \$646,377 in 1907, \$520,496 in 1908, and \$360,344 in 1909. There was no cement imported from the United States at Liverpool, nor are there any such imports mentioned in the British statistics.

## Great Quantities of Cement Used.

[From Consul Samuel M. Taylor, Nottingham.]

Great quantities of Portland cement are used in this district, which includes Nottingham, Derbyshire, Leicestershire and Lincolnshire. It is manufactured within a few miles of Nottingham and in Cambridgeshire. New works also are being erected all over the country for its manufacture. There is very little white cement used at present, and only for fancy decorative work. The cost of American white cement delivered in Nottingham is between \$48.00 and \$53.50 per ton. It is used chiefly for steps and outside decorative work or anything that has hard wear. The price of English white is \$7.29 per ton, delivered in Nottingham; the price of ordinary Portland cement delivered in Nottingham ranges from \$5.83 to \$6.08 per ton. Anything at a price above this would not find a sale in this market. The railway carriage from Liverpool is \$2.43 to \$2.92 and from Hull \$1.95 to \$2.19 per ton.

[From Consul E. Haldeman Dennison, Dundee, Scotland.]

There is a depression at present (July 7) in the building trades and very little cement is being used, but even under normal conditions the quantity used in Dundee is not large. Most of it comes from England, and so far as can be ascertained is not manufactured here at all. Probably not more than 9,000 tons are imported annually.

There is a possibility of the Dundee municipality extending its waterworks system in the near future, when a good deal of cement will be required, in which case it would be well to communicate with the city engineer. The harbor abond has recently been reorganized, with a view to pursuing a more progressive policy than has been the case in the past, in order to bring the port facilities more up to date. Among the improvements contemplated is the construction of a sea wall. This work would be in charge of the harbor engineer.

## SWEDEN.

[From Consul Stuart J. Fuller, Gothenburg.]

The cement trade in Sweden is controlled by a business combination popularly referred to as the "cement trust." They are understood to control the Swedish production, which amounts to about seventeen times the quantity and twenty times the value of the total import. Ordinary cement is imported only when this combination raises the domestic price above the limit which consumers consider proper. There is nothing particularly permanent about the import trade.

The import of cement at the port of Gothenburg, the only import in the consular district that amounts to much, constitutes about 22 per cent of that for the entire kingdom. It does not exceed in value \$25,000 a year. The cement imported during the last five years was as follows, in tons: 1906, 3,734; 1907, 5,143; 1908, 1,633; 1909, 2,846; 1910, 3,925. The figure for 1910 is an estimate, based on preliminary figures from the customs. In 1909 about 60 per cent of the imports came from Denmark, 37 per cent from Germany, and the balance from Belgium.

## Production of Swedish Cement.

There are seven cement works in Sweden, employing in all 1,160 men, with a total production in 1909 valued at 7,064,035 crowns (\$1,893,161), as compared to a total import for the kingdom for the same year valued at 357,723 crowns (\$95,870). Of this total production all but about \$402,000 was manufactured in this consular district; that is, in central and southwestern Sweden. The largest producing plant is located at Limhamn, near Malmö; it employs 420 men and has an annual output valued at \$622,007. The following figures give the total production for the kingdom for the three last years for which statistics are available, with the value: 1907, 194,395 tons, value \$1,715,739; 1908, 222,125 tons, value \$1,903,169; 1909, 220,114 tons, value \$1,893,161.

Architects and persons in the building trades here state that no white Portland cement has ever been used in Sweden. Decorative effects are secured with lime plaster, gypsum plaster and chalk and mortar in indoor work. A so-called "marble" cement of English and German manufacture has been used to a limited extent for ceilings. For outside decorative effects ordinary Swedish cement with mortar and sand is used.

Swedish cement is always specified on government work, which, up to date, has embraced most of the large cement contracts. There is a strong movement on foot here to encourage home industry by purchasing goods of Swedish manufacture and specifying them on private work, but in view of the circumstances it is not likely that this would have much effect in the cement business. The price of ordinary cement varies from 6.90 to 7.10 crowns (\$1.85 to \$1.90) per barrel, equal to three sacks of the size usual in the trade throughout the world.

## Extent of Cement Exports—Entering the Swedish Market.

With the assistance of the direct steamship lines under the Swedish flag to South American and South African ports, Sweden has been for some time endeavoring to build up an export trade in cement and at the present time exports about two and one-half times as much as is imported. A surprisingly large proportion of the export, and one that is increasing, goes to Argentina, Norway, Finland, Russia and Denmark are heavy customers. In the past considerable quantities have been shipped to British South Africa. The figures for that port for the past five years are as follows, in pounds: 1906, 77,770,472; 1907, 33,336,456; 1908, 63,589,991; 1909, 52,659,607; 1910, 83,916,745. The exports from Gothenburg are not of great importance, although, in 1909, 2,362 tons went from here, almost all to Argentina and the small balance to Mexico. The export for 1910 is estimated at 95 tons.

In considering an effort to introduce American cement into Sweden it should be borne in mind that not only would there be the opposition of what is, for Sweden, a large and influential association of manufacturers, but also the competition of English, German, Belgian and Danish manufacturers, with the advantage of proximity, direct and frequent water transportation at low rates, and easy communication of all kinds. There is telephone service from here to Denmark and to northern Germany.

To develop anything like a permanent trade in the face

of this opposition would require excellent local representation and a thorough advertising campaign, and would probably necessitate considerable price cutting at the outset. Foreigners are allowed to engage in business in Sweden only on permission from the crown and after putting up bond to cover possible taxation in advance for three years. They are not permitted to hold real estate. The foreign concern would thus be limited to traveling men, a local Swedish agent, or a subsidiary company organized under the Swedish corporation laws. Traveling men are taxed \$26.80 per calendar month spent in the country. While not all of the dealers could correspond in English, advertising literature in that language would be understood.

Banking facilities here are adequate and good. The banks will correspond in English, and the principal ones have connections in the main American centers. Credit information relative to firms in Sweden may be obtained from the American mercantile agencies. Ordinary credits run from three to six months or longer, and the business rate of interest is 6 per cent.

Should the proposed direct Swedish steamship line between here and New York materialize, it would doubtless be in a position to quote low freight rates. At present there is only one direct line from here to the United States, the Norwegian Mexico-Gulf line, with monthly sailings to Newport News and Gulf ports. Other goons arrive via Copenhagen, Hamburg or British ports, after transshipment.

## SWITZERLAND.

[From Consul George Gifford, Basel.]

There is hardly a possibility of selling Portland cement in this country. Though great quantities are used, its manufacture has become almost a Swiss specialty. In the Jura region, in the vicinity of Basel, the banks of the streams are almost lined with cement factories. This product is sold by the manufacturer for about \$70 a carload of 5 tons. Though the opening of the Rhine to freight traffic from Rotterdam to Basel would much facilitate the import of this and other heavy articles from the United States, it is thought that the freight rates would still be prohibitive.

Another fact that makes the mention of other difficulties almost superfluous is the agreement of domestic manufacturers with dealers and agents by which the importation of Portland cement from abroad is absolutely excluded. Even the German is unable to pierce the barrier raised by this sort of protective trust or syndicate.

White cement is on a different footing, and something in this article might perhaps be done if the difficulty in regard to freight could be overcome. There is one domestic manufacturer near Basel, but the most of the article used here is said to come from Paris.

## ASIATIC TURKEY.

[From Consul Jesse B. Jackson, Aleppo.]

Portland cement has not been used in Syria until recently. In fact, the trade is only in its infancy, although the outlook for future development seems satisfactory.

Building operations are generally conducted at low cost, suitable stone being found in the vicinity of Aleppo in endless quantities. This stone is soft and easily accessible, so that only little effort is required to quarry it. Cement blocks are therefore not used for building. Up to the present, all roofs have been constructed of a cement made from local lime mixed with native earth, resembling black sand, and wood fiber or coarse hemp, all of local production.

The value of Portland cement is coming to be recognized in the construction of cisterns, of which each dwelling has one or more. The excavations are made in the stone, according to the dimensions desired, at the time of the laying of the foundation for the building. The inside of the cavity is lined with cement, as the stone walls are too porous to retain the water for any length of time. During the latter part of the rainy season, which extends from December to March, the cisterns are cleaned and permitted to fill. They must be large enough to contain sufficient water to last until the next rains come. Up to the present practically the only consumption of Portland cement has been in this connection. However, as Aleppo has some 200,000 inhabitants, the demand in this respect is of considerable importance, and is increasing.

Instead of white nonstaining Portland cement, lime of local production is employed for decorative purposes inside of the buildings. Lime mortar is also used instead of cement for the laying of stone in the construction of houses. For the streets of the city are built of stone, and it is not likely that there will be any demand soon for cement for that purpose. As Aleppo is an inland city, there is no dock or harbor building to look forward to. The city is undergoing a building epoch, several hundred new houses being constantly under construction. It is said that the new railway stations and other buildings to be erected next year will also require a considerable amount of cement.

Nothing is known of any cement deposits in this territory, but discoveries may occur at any time. The lime made locally is of an excellent quality and makes a most enduring mortar. It is quite possible that all of the ingredients may be at hand for the making of first-class Portland cement.

All of the cement used in this country is imported from Belgium, England, and Austria, and is all natural, there having been, so far as is known, no importation of portland cement. During 1910 the importation of Portland cement into Aleppo was between 300 and 400 barrels of 100 kilos (220.46 pounds) each, but it is estimated that next amount will reach 1,000 barrels in 1911 and exceed that amount in 1912. The price ranges between 35 and 50 francs (\$6.75 to \$9.65) per metric ton of 2,204.6 pounds, depending on the quality. It is all sold brut pour net, the gross weight, including the weight of the barrels, being calculated as the net weight, for the dealers sell the barrels for more than the value of the weight thereof in cement.

It has been observed that the local dealers in other building materials do not as a rule handle Portland cement except in a secondary manner, as the importing is done principally through a certain commission house.

The cement should be packed in very strong barrels, as it is handled at least four times before arriving at the final destination. The customs duty is 11 per cent ad valorem, and all invoices must be certified to by the sellers as showing the true and correct selling price of the goods, which certificate should be written in French. The customs duty is stated as a matter of information only and does not figure in the prices if quoted c. i. f. at the port. Payment against documents will probably be satisfactory to Aleppo buyers.



INDIA.

[From Consul Edwin S. Cunningham, Bombay.]  
Portland cement is rather extensively used in Bombay, as the following import statistics show:

From—	1907-8.	1908-9	1909-10.
United Kingdom .....	\$272,842	\$270,732	\$283,534
Belgium .....	5,532	10,059	11,498
France .....	8,102	8,140	2,599
Austria-Hungary .....	1,759	289	1,637
All other countries.....	115	.....	2,762
Totals .....	\$288,350	\$289,220	\$302,030

CANADA.

[From Consul General James W. Ragsdale, Halifax, Nova Scotia.]

A press item states that an English cement combine is said to be contemplating the establishment of cement mills in Canada. This company has just offered in London 5 per cent second-debenture stock to the amount of \$600,000. The announcement says that from the prospectus it would appear that this stock issue has a direct bearing on the company's Canadian plans.

American Trade in Cement.

Cement imports into the United States have fallen away rapidly in the last few years. The value of Roman, Portland and other hydraulic cements imported in 1907 was \$3,069,926; in 1908, \$1,973,472; in 1909, \$712,628; and in 1910, \$602,833. Of the total for 1910, Germany furnished \$291,635 worth and Belgium \$160,374. Exports of cement from the United States have increased in value from \$1,180,415 in 1907 to \$2,292,376 in 1910. Of the latter amount, however, \$2,228,893 worth went to Panama. The two consumers next in importance were Cuba with \$458,063 worth and Mexico with \$161,696.

[Lists of firms interested in cement in the countries dealt with in the foregoing series are on file in the Bureau of Manufactures and will be loaned to interested parties.]

The holdings of the Alma Cement Company were sold September 1st at Wellston, Ohio, by United States Court under a foreclosure mortgage given to the Standard Trust Company of New York. The property consists of the second largest cement mill in Ohio and 3,300 acres of mineral land in that state.

NEW YORK SAND AND GRAVEL NEWS.

New York, September 18.—The local sand and gravel market was quiet during the past month and dealers report business below last month's average. The demand for sand and gravel has been slow during the past three and four months, and dealers are of the opinion that business should improve when financial conditions in Wall street adjust themselves. To all appearances the fall demand will be a backward one. Dealers, however, expect a good business during the next three months, as this is, as a rule, their busy season.

Joseph N. Ely, of the Crescent Sand & Gravel Company, in reviewing the situation in the local sand and gravel market, said: "The demand for sand and gravel during the past four weeks was fairly good, but business was not as good as it was the previous month. The demand for gravel was greater than for sand. Prices remain unchanged. We looked for better business to begin in the early part of September, but up to date our expectations have not been realized. It appears as though the fall season will be a backward one."

Charles A. Fox, general manager of Phoenix Sand and Gravel Company, in reviewing the local sand and gravel situation, said: "The demand for sand and gravel during the past four weeks was fairly good. Though business was not, as a rule, on a steady basis—it came along in spots. One week business would be slow, and the next we were kept on the jump making deliveries. As soon as financial conditions improve, so will business in the sand and gravel trade, and not only in our line but also in all other trades. We were to start on a big job the first of the month, but through some hitch in negotiating loans to carry on the work we have not received orders to commence yet. The outlook for a good fall business is very bright, and unless all indications fail we will do a good business during the next month."

W. J. Timberman, general manager of the Goodwin Sand and Gravel Company, in reviewing the local sand and gravel market, added: "There are not any improvement noted in the sand and gravel trade during the past month, and business continued along quiet lines. These dull conditions have been with us for some time now, and we are unable to account for the same. We understand that the same dull state of affairs exists in other lines and that the complaint is general. We believe, however, that as soon as financial affairs adjust themselves there should be more activity in construction work and public utilities. The price of sand and gravel remains unchanged."

The Niles Sand, Gravel & Rock Company has been incorporated in San Francisco, with a capital stock of \$100,000.00, by W. H. Ford, H. C. Plummer and R. R. Moody.



The J. C. Buckbee Company are preparing plans for a 1,000-yard gravel washing plant for the Niles Sand, Gravel & Rock Company, Niles, Cal., which plant when completed will be the largest plant west of the Rocky mountains.

The same company has completed plans for a new gravel washing plant for the Bull Creek Sand & Gravel Company, Columbus, Ga., and the same is now under construction. This plant will have a capacity of about 300 yards daily and be in operation within six weeks.

The plant of Stewart & Hewitson at Port Arthur, Ontario, designed and built by the J. C. Buckbee Company, was put in operation the latter part of July and has since been working to full capacity, turning out stone for paving, concrete and other improvements about Port Arthur and Fort Williams, Canada.

INSTALLING WASHING PLANT.

The G. W. Bunker Company, of Grand Rapids, Mich., is building a new sand and gravel washing plant. The entire equipment is being furnished by Raymond W. Dull & Co., of Aurora, Ill. Mr. Bunker was formerly a government engineer, then later a dredging contractor on government work.

PITTSBURGH SAND AND GRAVEL NEWS.

Pittsburgh, Pa., September 18.—A few sand companies are busier than they have been for two years. Others report that conditions are only fair and that they do not expect any big rush of business this fall. The jobs which are now being worked on are mostly big ones, and those companies which have been fortunate enough to get in are working night and day. Most of the fleets on the rivers are busy, and deliveries for the past two months have probably been considerably larger than during the same month of 1910.

The Ohio River Sand & Gravel Company has been organized at Huntington, W. Va., with a capital of \$25,000 by W. B. McCowen, M. F. and T. E. Walker, J. E. Berry and J. M. Beale.

The Berkley Glass Sand Company is getting ready for business down at Berkley Springs, W. Va. It has a capital of \$200,000, and Henry P. Bridges is its president, and Nelson Perin secretary and treasurer.

The Keystone Silica Sand Company has been organized by Albert P. and Howard C. Meyer and A. W. McCandless, of Pittsburgh, and will buy machinery to do a general sand and gravel business in this city.

The Rodgers Sand Company has the contract for furnishing all the sand and gravel for the building operations on Federal street, North Side, where about forty buildings will be raised about 8 feet to meet the new street level. Captain W. B. Rodgers, president of this company, owns several of these structures, and is taking the precaution to raise them one foot higher than the limit named by the city authorities. The Rodgers Company also is working hard on the contract for Dam No. 1 on the Monongahela River, and has its entire fleet of boats digging.

The sand companies, as well as all other wharf users, are greatly pleased with the work being done by the city in building sidelong roads on the Water street wharf. Instead of the rough cobblestone pavement, with one vertical road as before, there is now a broad street at the foot of the wharf its whole length parallel with the river, and from the other end of this a circular roadway will run up the hill from the foot of Wood street. The contract has been let to Daniel Dinardo.

The Iron City Sand Company has the contract for furnishing all the sand and gravel for the Federal street raising on the north side, about 6,000 cubic yards in all, and the company is delivering at the rate of about 400 yards per day. It is digging this material just below the Sixth street bridge over the Allegheny River. In addition to this contract it is furnishing all the sand and gravel for the South Eighteenth street filling, which contract amounts to about 11,000 cubic yards. The company is working 150 teams and was never so busy before.

The National Sand & Gravel Company reports business rather quiet in general. It is working one boat and expects to see a good number of projects now pending on the boards in the near future.

LOUISVILLE SAND AND GRAVEL NEWS

Louisville, Ky., Sept. 15.—The amount of concrete construction which is now being rushed forward in Louisville is developing a pressing demand upon the sand and gravel supply men and dredgers are working overtime in an effort to satisfy the call. Present activity could not well be improved upon and the chances are that several months' continuance of this enviable condition is assured.

The Ohio River Sand Company, according to John M. Settle, has pretty well cleaned up its big sewer contracts, but in view of the recent action of the Board of Public Works in planning extension of the present drainage system it is probable that more work along this line will be forthcoming before long. Business is certainly good at present, but will be better undoubtedly as the fall season progresses, said Mr. Settle.

The Nugent Sand Company is hard at work upon several big contracts which demand the entire output of the establishment and make the entire situation highly satisfactory. The outlook is that the company will land a couple more big ones within the next month, insuring a steady and consuming demand throughout the fall. According to J. P. Fitzpatrick, the Nugent jobs at present are as follows: The 11-story Watterson hotel building on Walnut street, near Fourth avenue; the Weisinger-Gaulbert apartment building annex, ten stories, at Third avenue and Broadway, and the 10-story law office building which is being erected by the Falls City Construction Company at Center and Jefferson streets.

E. T. Slider, the sand and gravel dealer on the Indiana side of the Ohio river below New Albany, Ind., is developing a fine lot of local business as well as the resident trade on the Hoosier side of the sand-producing stream. The Slider establishment is enjoying a high degree of prosperity, and the floats, dredgers and river offices of the concern have been rehabilitated, repainted and put in fine shape to handle growing fall trade.

The contractors of Owensboro, Ky., according to report, are at present paralyzed because of a sand and gravel famine in the western Kentucky field. The Kentucky Sand & Gravel Company, which supplies an extensive array of trade throughout that field, is out of commission, as far as the producing end is concerned, because of a shut-down necessitated by the installation of newer and more up-to-date machinery which will insure greater capacity. However, the supply famine will be short-lived for work of improvement on the Kentucky concern's property is progressing rapidly and the establishment will be in shape to handle a greater volume of business than ever before in the near future.

TENNESSEE SAND AND GRAVEL NEWS.

Memphis, Tenn., September 12.—J. B. Ezzell, of the Ezzell Mill and Stone Company, Newsome Station, Tenn.; Fred Fuller, of the Newsome Crushed Stone and Quarry Company, Nashville, Tenn., and R. T. Creighton, of the Foster, Creighton & Gould Company, of Nashville, Tenn., were in Memphis recently examining some government tests which were made at the Fischer Lime & Cement Company's yards.

Atwell Thompson, of Jackson, Tenn., will be in charge of the "Memphis-to-Bristol" state highway project, so far as the survey is concerned in West Tennessee. An engineer will probably be furnished by the National Department of Good Roads. A maximum grade of 6 per cent for the highway will be attempted, and 8 per cent in difficult places will be allowed. The width is to be twenty feet, of which a central strip twelve feet wide is to be metalled.

McMinn County (Tenn.) has lately sold \$300,000 of road bonds to a Chicago firm, disposing of them at a premium of \$3,900. They are 30-year 5 per cent bonds, and are to pay for 150 miles of pike road.

The Memphis Gravel Company reports a good demand for stock and business moving right along at its pits. These and other properties along gravel lines have lately received considerable attention from the State Geologist of Tennessee.

ILLINOIS SAND AND GRAVEL NEWS.

Springfield, Ill., Sept. 18.—William H. Hunt & Son, of Galt, secured the contract to furnish twenty-five cars of sand and gravel for the Grove street improvement in Morrison.

The Springfield Road Supply Company of Springfield has been incorporated, with capital stock of \$1,000.00, to deal in gravel and to construct roads. The incorporators are Ernest Lee, Annie E. Lee and William Milburn.



### THE EMPIRE GYPSUM CO.

The Empire Gypsum Company has its main offices in Rochester in the Cutler building. Its plant is in Garbutt, and its mines are in Garbutt and Wheatland, N. Y. It is a three kettle mill with a capacity of 200 tons of plaster a day. The plant is electrically equipped throughout. Located on the Pennsylvania Lines and the Buffalo, Rochester and Pittsburgh railroad, with private switches, it possesses the best of shipping facilities. The rock taken out of the mines is shipped in crude form, for plate glass use, in crushed form for cement use. The plant is equipped with a mogul crusher and a Williams pulverizer installed by the Williams Patent Crusher & Pulverizer Company of Chicago. It also has an air separating system in addition to its grinding equipment. The Broughton mixers are used here. The brands of the Empire Gypsum Company which are popular wherever used, are the Reliance wood fibre, the "Empire Neat Cement" and the "Excelsior Sanded" Plasters. The sales of this plaster are large in New York, New Jersey, Pennsylvania and the New England States. The officers of the company are: August A. Wolf, president and treasurer, and W. E. Gardiner, secretary and sales manager.

### DIAMOND WALL CEMENT COMPANY.

The Diamond Wall Cement Company with office and yard at 364 Plymouth avenue was established in Rochester fifteen years ago. Its main offices are in Williamsport, Pa., and its plaster mill and gypsum mines are located in Garbutt, N. Y. The output of this mill is 300 tons of plaster daily. Its brand "Diamond Wall Cement" is popular and has a large sale in New York, Pennsylvania, Maryland, Virginia, New Jersey and New England, and it is said that there was probably more of this plaster used in the buildings in Rochester than any other. An addition is being built to the plaster mill at Garbutt 125 feet long, and a new Gates crusher No. 6 just installed. Recently the entire plant in Garbutt has been equipped with electric power and the hauling of rock to the crusher is done by electric locomotives which run into the mines. The vein of gypsum runs from 6 to 7 feet in thickness and it is claimed to be the finest mine in the state.

At the present time it handles in its Rochester builders' supply yard cements of the Universal, Bath and Allentown Portland Cement companies; "Banner" hydrate of lime of the National Mortar and Supply Company, Gibsonburg, Ohio, and "Challenge" hydrate of lime of the Farmer Lime & Cement Company, York, Pa.; Sackett Plaster Board of the U. S. Gypsum Company; "Diamond Wall Cement," its own brand of plaster, sewer pipe, flue lining, wall coping, etc., of the New York State Sewer Pipe Company, Rochester; plaster of Paris and marble dust of J. B. King & Co.; Keene's cement from Best Bros.; Lolly concrete filled columns of the U. S. Column Company, Cambridge, Mass., and Langley iron columns from the Lolly Manufacturing Company, Cleveland; common and pressed brick from the Flower City Brick Company, Rochester, and cement blocks from J. Frank Norris of Rochester, in fact everything in masons' supplies. The officers of the company are Frank H. McCormick, president; and C. A. Sweet, secretary and resident manager at Rochester. Mr. Sweet reported that while business had been fair, but quiet, three months ago it became very active and since that time had been rushed with orders for building material and prospects looked very bright for fall.



PLASTER MILL.

### LOUISVILLE PLASTER NEWS.

Louisville, Ky., Sept. 15.—The wall plaster interests of the Gateway City are enjoying just as much, if not a little more business than they have ever experienced before, and in a city of a quarter of a million population, with everybody in a prosperous building humor, that is saying a great deal. Several big plaster contracts developed during the past month, supplementing a quota of large-sized jobs which were in progress, and there was an unusually good amount of residence work on hand. Residential building in the suburban sections of the city, such as the Highlands, Crescent Hill and Parkland, is progressing at a rate which keeps steady pace with the universal building boom now going on in the Bluegrass metropolis.

The result of the city-wide activity in building lines is that every plaster manufactory is working to capacity limit. Not only is this true, but the fact remains that extensive preparations are being made for plant enlargements and improvements in order to accommodate growing trade.

"Business is much improved in comparison to what it was a month or so ago and the prospect is that the Kentucky plant will have all the demand it can attend to for the rest of the fall season," was the satisfactory report of B. J. Campbell, of the Kentucky Wall Plaster Company. The Kentucky force is still furnishing plaster on the big Tyler hotel job at Third avenue and Jefferson street, and is also working on a large contract for the recently constructed addition to Sts. Mary and Elizabeth hospital at Twelfth street and Magnolia avenue.

Business is pronounced to be of exceptional quality and quantity with the Southern Wall Plaster Company. A \$5,000 contract for plaster to the Bland and Morgan street public school, one of the model educational institutions of Kentucky, is now in course of delivery, and lots of smaller residence jobs are being handled. The Southern is also working upon a contract for plaster to the kitchen and laundry erected for Sts. Mary and Elizabeth hospital. J. H. Jones, of the company, said that the outlook is highly satisfactory in every particular.

The Atlas Wall Plaster Company is working up a lot of residence business in the growing suburban section of Parkland, in which it is located. The West End company is figuring on the installation of new plaster manufacturing equipment to increase its capacity in the near future.

### GRAND RAPIDS PLASTER NEWS.

Grand Rapids, Mich., Sept. 16.—You cannot detect the least sign of rust on any of the rails of the switch tracks leading to the hard wall plaster plants of the Grand Rapids district. That means, of course, that the rails are being used. It means that the mills are shipping constantly. Down at the Acme plant everything is bustle and business. The three kettles have been going it overtime. D. L. Kibler, the superintendent, was caught just as he came up out of the mine. "Business is great," he said, as he rubbed a chunk of rock out of his eye. C. D. Pitts, the chief clerk, was busy in the office, and all the men about the mill were hustling.

A few million miles across the Grand River valley from the Acme is the American mill. It is a fine plant. W. Henley, the manager, said the mill has been running fourteen hours a day to keep up with orders. There are 130 employees, and the capacity is 200 tons a day.

Then down the road a piece is the United States Gypsum Company's mill, which is going it all the time, and just beyond are the two great mills of the Grand Rapids Plaster Company. A. H. Apted, the superintendent, has been in the plaster business forty-four years. In fact he was born on the hill overlooking the big institution. His father before him was a plaster man. The two mills of the Grand Rapids Plaster Company and the third, further down the valley, twelve kettles in all, have been developed during his career. James Leenhouts, head of the great concern, feels that the



ELECTRIC LOCOMOTIVE HAULING GYPSUM ROCK FROM MINE OF DIAMOND WALL CEMENT COMPANY, AT GARBUTT, N. Y.

immediate prospect is very encouraging for plaster, and his usual optimism is even more apparent than at the beginning of the season.

The Jackson Pressed Brick Company, of Jackson, Mich., with factories in Jackson, Battle Creek, Saginaw, Kalamazoo, Grand Rapids, Michigan City and elsewhere, was sold recently to the Sand Brick Company, of Saginaw, which will manufacture sand-lime brick.

Thomas A. Edison, America's greatest living inventor, is touring Europe and seems to find much to amuse him, if the newspaper accounts are to be relied on. It is his first vacation in years, and he seems to be taking the full measure of enjoyment from it. We may confidently expect more new and startling things from the Wizard of Menlo Park when he returns, because it does one good, even an Edison, to brush the cobwebs out of the brain now and then.

### SAN FRANCISCO PLASTER NEWS.

San Francisco, Sept. 12.—One of the large plastering jobs on the coast is that for the new Metropolitan Theatre at Seattle, Wash., which is being done by Cullem & Co., of Tacoma, at a price of \$30,000.00. It includes all the plaster relief work, which will be one of the principal decorative features of the theatre. A still larger job will be that on the city hall at Oakland, Cal., new bids for which were taken a few days ago. The lowest was about \$51,000.00.

### THE UPSON COMPANY.

The Upson Company was incorporated at Lockport, N. Y., last November. Charles A. Upson is president and W. H. Upson is secretary. It has just commenced this month to manufacture fiber products of all kinds, among which is a fiber wall board having several new and exclusive features, and when placed on the market will attract deserved attention. Announcement of this wall board will be made to the trade during the next 60 days.

### HUNT & DAVIS.

Hunt & Davis, with offices 400-404 Exchange Place Building, Rochester, N. Y., bought the entire plant and business recently of the old Monarch Plaster Company. They are miners and dealers in crushed and crude gypsum rock. Their mines and mill are located at Wheatland, N. Y. The mill which was destroyed by fire last June was rebuilt, practically finished and is in full operation today crushing rock.

The John A. Borland Company has been incorporated at Chicago with a capital stock of \$5,000, to do a general contracting and plastering business. The incorporators are John A. Borland, Tressa A. Borland and Edward G. Henkel.

The Cassell Cement & Gravel Co., of Augusta, Ga., secured the contract for 200 cars of gravel to be used on the automobile course at Savannah, Ga. The contract was awarded on a competitive basis and several bids were made from this district.

The Colonial Sand & Gravel Company has been incorporated at Manhattan, N. Y., with a capital stock of \$10,000, to deal in building materials. The incorporators are James S. Cullen, Jr., F. J. Schmitt and J. H. Cullen, all of 1 Broadway, New York City.

The National Sand & Land Development Company has been incorporated at Peekskill, N. Y., with a capital stock of \$250,000 to deal in sand and gravel. The incorporators are J. E. Bowman and N. Dubois, of Newburgh, and G. H. Rice, of Peekskill.

The Aurora Sand & Gravel Company was recently incorporated at Aurora, Ill., with a capital stock of \$5,000. They will deal in sand, cement and manufacture concrete products. The incorporators are Albert J. Erlernborn, J. Harris Bligs and Joseph O'Hara.



INTERIOR OF GYPSUM MINE.



# Concrete

## National Association of Cement Users

Meets Annually.

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 Peter Gillespie, Toronto, Canada, ..... Nomenclature.  
 Sanford E. Thompson, Newton Highlands, Mass., ..... Specifications and Methods of Tests for Concrete Materials.  
 Logan Waller Page, Washington D. C., ..... Education.

Remember the dates of the three great cement shows:

New York—Madison Square Garden, January 29-February 3, 1912.

Chicago—Coliseum, February 21-28, 1912.

Kansas City—Convention Hall, March 14-21, 1912.

### CEMENT SHOWS OF 1912.

Allotment of Space October 6 For Big Events in New York, Chicago and Kansas City.

Practically all arrangements have been completed for the allotment of space at the three big cement shows to be held by the Cement Products Exhibition Company during 1912. The first show will be in Madison Square Garden, New York City, Jan. 29 to Feb. 3, 1912, the second at the Coliseum in Chicago, Feb. 21 to 28, 1912, and the third at Convention Hall, Kansas City, March 14 to 21, 1912.

The allotment of space by drawing for the three shows will take place at the offices of the Cement Products Exhibition Company, 72 West Adams street, Chicago, Friday, Oct. 6. All applications should be filed on or before noon, Tuesday, Oct. 3, for the drawing on Oct. 6. Space will be allotted by a similar drawing, immediately after the first drawing, to those exhibitors whose applications are received later than noon, Tuesday, Oct. 3.

A number of changes have been made in the general rules and regulations of the Cement Products Exhibition Company for the cement shows during the coming year, the result of experience during previous shows, which it is believed will be a great benefit to the exhibitors. The services of a traffic manager have been engaged to assist exhibitors in routing, shipment and delivery of exhibits, and this service will be furnished by the exhibition company absolutely free of charge to the exhibitors.

The Cement Products Exhibition Company has obtained the services of M. E. Gordon, of Chicago, as installation manager for the New York, Chicago and Kansas City cement shows. Mr. Gordon has been identified with practically all the cement exhibitions held during the past six years and he is well known to a great many of the exhibitors for whom he has done work. His engagement as installation manager for the cement shows is the outcome of the ability and efficiency he has displayed at past shows.

#### Last Show in Madison Square.

The demolition of Madison Square Garden will begin on the day following the close of the Second Annual New York Cement Show. A new syndicate, which has been organized to take over this property, will begin the destruction of the garden just as soon as the exhibits at the cement show are removed. It is understood that a large office building is to be erected in place of the garden.

The closing of Madison Square Garden will bring to mind the many notable events in the history of this well known structure, chief among which in recent years have been many conventions, indus-

trial exhibitions, the New York Horse Show, the Automobile Show, the Kennel Show, noted exhibitions of the prize ring, etc., to the long list of which was added in the latter part of 1910 the first New York cement show.

The New York Cement Show will give the public a last chance to visit this historic structure. The show will be replete with new features, and the rapid development made by one of the comparatively new industries, the cement and concrete industry, will be strikingly displayed by many novel exhibits, setting forth the practicability and general use of cement and concrete in construction of every nature.

#### Changes at Coliseum.

Exhibitors at the Fifth Annual Chicago Cement Show will no doubt be interested in learning that work has recently been completed in putting a massive concrete foundation under the entire Coliseum building, where the cement show will be held. This will permit the exhibitors to display to much better advantage the manufacture and use of concrete in general construction by actual exhibition and demonstration of many of the large machines used in connection with the cement and concrete industry, which has heretofore not been possible on account of the weight of the machinery.

Arrangements are being made by the exhibition company whereby electric motors may be had at a low rental by the exhibitors for demonstration and operation of different machines.

#### Benefit to the Contractor.

While it is impossible to get a definite idea as to the number of contractors who attend the cement shows held annually in New York, Chicago and Kansas City by the Cement Products Exhibition Company, the fact is very much in evidence that through the medium of these cement shows rapid development is being made in contracting, as a result of the visits of contractors from all parts of the country at the cement shows each year.

Competition is cited as one of the incentives which makes necessary a better understanding of equipment and an intimate knowledge of its application in various fields of contracting. The exhibits of equipment at the cement shows typify the latest ideas in the different fields of the work. Many contractors have by means of the cement shows formed an acquaintance with the different types of machinery and equipment which it would have been difficult to have gained through other sources.

This fact is aptly illustrated by the work being done by a well-known contractor for street work in one of the large western cities. This contractor, who never misses the cement shows, uses the newest types of machinery to be had in his work and employs up-to-date methods in all lines. The result is the streets upon which he is working are closed to the public for the least possible time and the work when finished is indicative of the improved methods employed. His work excites favorable comment by all, even by people who have no personal interest in it. This man is establishing records which will be of inestimable value in securing future contracts.

All phases of cement and concrete construction are set forth at the cement shows by actual demonstration. The newest and most up-to-date methods of using cement and concrete in all of the many branches of building and construction are seen and explained.

A large attendance from the ranks of the contractors throughout the country is anticipated at the Second Annual New York Cement Show, Madison Square Garden, January 29 to February 3, 1912; the Fifth Annual Chicago Cement Show at the Coliseum, February 21 to 28, 1912, and the First Annual Kansas City Cement Show, in Convention Hall, Kansas City, March 14 to 21, 1912. Many inquiries and applications are being received daily by the Cement Products Exhibition Company, 72 West Adams street, Chicago, which illustrates the widespread interest taken in the annual cement shows.

#### ADOPT CONCRETE BLOCKS.

At a recent conference of the superintendents of buildings of New York City and the surrounding boroughs, regulations were adopted for the use of hollow concrete blocks in buildings, which in part are as follows: These blocks may be used in buildings not more than three stories high nor more than thirty-six feet in height, and these blocks must come up to a certain standard of composition and be able to stand a pressure of 1,500 pounds a square inch at the age of twenty-eight days, the thickness of the walls not less than one-quarter of the height of the blocks, but in no case less than one and one-half inches.

Each block must have stamped thereon the name of the manufacturer or manufacturer's mark. This notice has been posted on the bulletin board of each bureau of the Building Department.

#### GRANITE IN STUCCO WORK.

The following letter is self explanatory. It was written by E. J. Bragyer, who is one of the Medusa White Portland Cement Co.'s salesmen, to John Harper Bonnell, 501 Fifth avenue, New York, N. Y., who is the owner of a famous granite quarry producing what is known as Iris Porphyry:

"Referring to our recent talk as to the possibilities of your pink granite in conjunction with the Medusa White Portland cement, for decorative stucco on residences with your polished pink granite as trim, would say that it strikes me that you are in possession of a long desired want among the various architects, which makes it possible to produce the most pleasing and artistic effect ever obtained.

"I will at first opportunity produce samples of your pink granite as an aggregate and Medusa White Portland Cement, showing its many uses as a decorative stucco that will surely be pleasing to the architects of New York City and vicinity. Trusting that our cooperation will produce another high grade building material and prove to all future owners the value of a pink granite mixed with a true white Portland cement,

"Very truly yours,  
 "(Signed) E. J. BRAGYER."

#### NORRISTONE.

J. Frank Norris, whose large plant where the well known and popular "Norristone" is manufactured is located on Norris street, Rochester, N. Y., had one of the exceedingly attractive displays at the Rochester Industrial Exposition. The exhibit consisted of special work in lawn vases, Japanese garden lanterns, and ornaments in the way of eagles, columns, etc., designed from l'art Nouvenux. Mr. Norris started his plant four years ago and since that time has been striving to make a better block than ever was made before, in which he has been eminently successful. His blocks are hand-tamped and when cured stand the highest test pressure available at the Mechanics Institute, 220,000 pounds pressure which failed to crack them or affect them in the slightest degree. He is now making a new concrete shingle, known as the Norristone tile shingle. It is waterproof and made in any color desired, "Norristone" is approved by architects and contractors. He uses the Hercules block machine in his factories. It is manufactured by the Century Cement Machine Company, of Rochester. His is the only plant in western New York with capacity for curing every stone made. Numerous factories, office and bank buildings, schools and residences in various localities of the state owe their ornate and stately appearance to "Norristone." The Norris plant consists of two large buildings 250 feet long and 45 feet wide, the largest in the country and is continually undergoing improvements. Three times in four years it has been enlarged and additions are being built at the present time to increase its capacity to supply the growing demand for this popular building product.

#### FURNISHING MIRACLE BLOCKS.

William E. Fish, the Bangor contractor, is doing a large business in furnishing Miracle double air-space concrete blocks of his manufacture for underpinning work and for entire houses, of which he has built several that are attracting much attention and favorable comment. He has recently completed an especially handsome cellar wall on the sidehill at Lovers' Leap for John Scott, the tea merchant, 35 by 75 feet, 13 feet high on the back side and 8 feet in front, on which is being erected a house for the storage of goods and premiums used in his business. The blocks are substantial, ornamental and fireproof, as well as absolutely damp-proof.

The plant of the Hazleton Tile & Concrete Company, of Hazleton, Ind., was damaged by fire August 25, causing a loss of between \$5,000 and \$6,000. It is likely the plant will be rebuilt.

The Granitoid Stone Company, of Urbana, Ill., won first prize for artificial stone at the Champaign County Fair. A feature of their booth was the offering of three prizes of \$24, \$16 and \$8 for the best guesses as to the number of barrels of Portland cement used in Champaign County in the month of August. In their tent they showed what can be done with concrete blocks of all sizes, kinds and colors, the construction of a house and the durability of a concrete silo, fence posts, corn crib flooring, etc. E. H. Somers was in charge of the exhibit.

The Cement Products Manufacturing Company, Plainfield, N. J., was chartered under New Jersey state laws August 8; capitalization \$10,000.00.

## STATE FAIRS

### Cement Manufacturers and Concrete Machinery Men Are More Than Ever Taking Advantage of This Method of Reaching the Farmer.

Previous successes prompted the management of the Iowa State Fair to attempt a "nine day" fair this year, instead of the customary seven days, but it is doubtful, from an exhibitors' standpoint (on whose behalf this new departure was made) if the business done during the two additional days warranted the expense coincident with being on the grounds that much earlier.

The Fair was formally opened on Thursday, August 24th, and, although the weather was excellent, the attendance was not up to expectations. Friday and Saturday were somewhat better in this respect, but it was not until Monday that the real farmers arrived in numbers, and from then until the closing day the attendance was as good as in former years.

The new steel-frame-and-brick machinery building on the state fair grounds, though only half completed, is one of the largest exhibition buildings in the world and afforded exhibitors attractive exhibition space, every available foot being sold weeks before the opening of the Fair. Next year the management hopes to complete the other half of this building, which will necessitate occupying the ground presently occupied by the street car company up to the main entrance.

The completion of this building, it is hoped, will provide the cement and allied trade exhibitors with ample space to install their exhibits at future Fairs under one roof. As it is, the Power Hall and the Machinery Hall accommodate some of them while others are forced to seek tent space outdoors.

While the cement and allied trades were fairly well represented, the absence of concrete block machine manufacturers and the manufacturers of silo forms is to be regretted. The state fairs offer an exceptional opportunity for the manufacturers of these devices to meet the farmers, whose interest in this particular structure was never keener than at the present time, doubtless owing to the wide spread publicity the agricultural experiment stations all over the country have been giving this particular subject in recent years. Eight stave silos were exhibited on the grounds, besides three clay tile silos, illustrating that the competitors of the cement silo are at least alive to the great possibilities this particular field offers.

In view of the large number of firms who practically specialize in the manufacture of silo forms and in block machines for the construction of cement silos, it is a little surprising that several of the more enterprising do not erect permanently exhibition silos on the various state fair grounds. That it would pay to do so, and at the same time further promote the use of cement on the farm, there is no question, while the initial expense would only amount to the cost of construction, inasmuch as the various State Boards of Agriculture willingly grant exhibition space for this purpose without cost to the exhibitor.

The cement manufacturers themselves will sooner or later have to adopt the permanent exhibit idea, and already our fair correspondent informs us the Chicago Portland Cement Company, manufacturers of the "Chicago AA" brand, have let contracts for the installation of such an exhibit at the state fair grounds in Illinois, Iowa, Minnesota and Wisconsin.

The customary state fair exhibit of the cement manufacturer appeals no longer to the farmer. With the number of uses for cement on the farm increasing daily, the farmer wants more than the usual booklet. He wants to see a full-size feeding floor surrounded by a staunch concrete fence. He wants to know the mix used in laying the floor and he wants to see the molds for making the posts, and the Chicago Portland Cement Company intend to satisfy this interest on the part of the farmer to the fullest extent.

The cement and allied trade exhibitors at the Fair were as follows:

Iowa Portland Cement Company, Des Moines, Ia.  
Universal Portland Cement Co., Chicago, Ill.  
Chicago Portland Cement Company, Chicago, Ill., represented by Mark R. Lilly and R. Crawford.  
Cement Machine Company, Guthrie Center, Ia.  
Cement Machinery Supply Co., St. Paul, Minn.  
Merrill Culvert Core Co., Winfield, Ia.  
Two Good Construction Company, Pilot Mound, Iowa.  
McElroy Post Mold Co., Cedar Rapids, Ia.

Waterloo Cement Machinery Co., Waterloo, Ia.

#### Minnesota State Fair.

The Minnesota State Fair, in point of attendance, perhaps the most popular annual event in the world, was but poorly patronized this year owing to the unfavorable weather which prevailed during the entire period, September 4th to 9th, inclusive. Rain fell almost continuously, making things disagreeable for exhibitors and visitors alike. One hundred and eighty-five thousand people attended, against 318,000 last year, while the receipts showed a decrease of \$100,000.

This is the first year this fair has been conducted under the management of J. T. Simpson, formerly secretary of the Iowa State Board of Agriculture, and it is rather unfortunate that the elements should have intervened when so much was expected of Mr. Simpson, personally, coming to Minnesota as he did, with the reputation of the one man responsible for the success of the Iowa State Fairs in recent years. However, the bad weather served to eliminate the souvenir hunter and other disinterested visitors from the attendance, thus enabling the exhibitors to reach the real "prospects" without exercising the usual discrimination.

The majority of the cement and allied trade exhibits were located on the ground space north of the Manufacturers' Building and included the following companies:

W. J. Garrett Company, What Cheer, Iowa (Cement Mixer).  
Medium Hollow Block Machinery Company, Minneapolis, Minn.  
Minnesota Silo Company, Willmar, Minn.  
Overturf Mold & Mixer Company, Dumont, Iowa.  
Reichert Manufacturing Company, Milwaukee, Wis.  
Superior Manufacturing Company, Minneapolis, Minn.



"CHICAGO AA" PORTLAND CEMENT BOOTH AT THE MINNESOTA STATE FAIR.

Universal Portland Cement Company, Chicago, Ill.

Waterloo Cement Machinery Company, Waterloo, Iowa.

The Chicago Portland Cement Company, Chicago, Ill., photograph of whose display we reproduce herewith, occupied Booth 24 in the Manufacturers' Building and was represented by J. W. Beckman and R. Crawford, Chicago office, and P. J. Meyer and C. O. Hanson, Minneapolis office. A practical souvenir in the shape of a miniature sack of "Chicago AA" Portland Cement was distributed among the visiting farmers.

L. V. Thayer, manufacturer of the famous Peerless Brick Machine, was also an exhibitor in this building, in company with Charles Bradley, of Rock Rapids, Iowa, who demonstrated the process of making concrete blocks with his Anchor Stone Machine. A canvass of these exhibitors at the close of the fair showed that considerable business was transacted.

#### Milwaukee Fair.

In spite of the laxity of the management in conducting the Wisconsin State Fair, this event continues to improve annually. The fair just closed in Milwaukee fully demonstrates this fact. Exhibitors were unanimous in stating that it is only with difficulty that exhibition space can be secured, owing to their repeated requests in this connection failing to bring forth any response from the management, while the restrictions placed upon the exhibitor regarding the hanging and tacking of signs and operating of machinery are unique in that such rigid rules are not enforced by any of the other State Boards of Agriculture.

Despite these conditions, however, one small manufacturer proceeded in disposing of three batch mixers, each costing \$225, and twenty post mold machines, and the other exhibitors on the grounds reported equally good business.

The weather during the entire fair was good, and

prominent among the visitors were the large number of dealers in building material from all parts of the state. The Chain Belt Company, of Chicago, the Universal Portland Cement Company, Chicago, Ill., and the Chicago Portland Cement Company, Chicago, exhibited in the Machinery Hall, a new concrete structure, the last named company being represented by C. H. Greenleaf and R. Crawford, J. U. C. McDaniel, sales manager of the company, being in attendance on Friday, September 15th.

#### MEMPHIS CONCRETE NEWS.

Memphis, Tenn., September 12.—The autumn opens with a large amount of activity in concrete lines here. Aside from the Lotus Building and the Falls Building, lately pictured in these pages and now being finished, the Union Station job, in which a carload of cement a day for a long time has been used for the tunnel work, approaches, etc., and several other structures, are still in initial or early stages.

The Carden-Callahan Company, engineers and contractors, of Chicago, have the contract on a six-story warehouse for the Oliver Chilled Plow Company, going up at the corner of Clinton place and Hotel alley, near the Mississippi River wharf. This building will be of reinforced concrete, with brick filling or curtains. Cost, about \$55,000.

The Ferro Construction Company is to erect for D. Canale & Co. a 4-story and basement reinforced concrete warehouse, 100 by 160 feet, and to cost \$100,000. This will be used for the wholesale fruit business of the latter firm.

The Lehigh Portland Cement Company has recently established general offices in the Memphis Trust Building to look after a large territory. Louis J. Moss is in charge.

The Memphis Granolith Company, managed by C. W. McDaniel, is using large quantities of Atlas cement in its block work for houses, porch columns, vases and burial vaults.

Huntingdon (Tenn.) is shortly to start a considerable amount of street paving in concrete. Dr. J. H. McCall is Mayor. Dr. McCall also has an office in Memphis in the Exchange Building.

McKenzie (Tenn.) contemplates as a municipality a small amount of concrete work. J. D. Herron is Mayor.

#### [NASHVILLE AND THE SOUTHEAST CONCRETE NEWS.

Nashville, Tenn., September 12.—W. F. Ready, of this city, is arranging to build a \$40,000 theatre here on Church street and Fifth avenue. Concrete, brick and steel will figure in the work.

An extensive addition to the hosiery plant of the Davis Hosiery Mill is to be built at Chattanooga. Brick with concrete floors. Plans by Architects Huntingdon & Sears, of Chattanooga. Contract to Chambers & Son, of Chattanooga.

Barnwell & Jones, architects, of Chattanooga, have secured the contract to make plans for the Y. W. C. A. building in that city.

The Nashville (Tenn.) High School is beginning to loom up at the corner of Broadway and Eighth avenue, South. The general contract is by George Moore & Co. Stone & Co., Cole Building, Nashville, did the concrete work, foundation, etc.

The Albany Hotel Company, of Albany, Ga., will erect a six-story fireproof concrete hotel building after plans by Architects Todd & Benson, of Charleston, S. C.

#### [SAN FRANCISCO CONCRETE NEWS.

San Francisco, Sept. 14.—The driving of concrete piles in the new municipal dock at Oakland, Cal., has been completed, and work on the superstructure has been started. The floor will consist of concrete girders and a concrete floor covered with asphalt. A railroad track will be laid the length of the wharf. This is the first of the work under a \$3,000,000.00 bond issue for wharf construction.

The Sacramento Valley Irrigation Company is planning an extensive underground irrigation system of concrete pipes on a tract which is being developed near Hamilton City, Cal.

The Healy-Tibbitts Construction Company has taken a contract amounting to \$19,500.00 for a concrete division wall in the new municipal reservoir of this city on Twin Peaks.

The Western Concrete Company has been incorporated at Los Angeles with a capital stock of \$10,000.00 by F. L. Wright, L. L. Miller, M. Wallace, R. Kerns and H. R. Wilson.

The Standard Concrete Company, of Poughkeepsie, N. Y., has been incorporated with a capital of \$30,000 to manufacture artificial stone and concrete products. The incorporators are: W. Knauss, G. Bahret and E. H. Travis, all of Poughkeepsie, N. Y.



## "Security" Portland Cement

(Every Barrel Guaranteed)

Means permanence and reliability to the architect, engineer and contractor.

## Berkeley Hydrated Lime

Added to Concrete insures waterproof and vermin proof work.

## "ALCA" LIME

(TRADE MARK)

Combines all the good qualities of old fashioned Lime Mortar with quick hardening qualities of Patent Plasters. It fills the long felt want.

Cement and Lime literature FREE.

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Equitable Building  
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WESTERN OFFICES  
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Sampling Universal Portland Cement four hundred and fifty times an hour as the finished product leaves the mill is one illustration of the thoroughness and care exercised at every stage in its manufacture. Our method of obtaining fair samples by means of an automatic device which removes from the conveying belt entering the storage bins a certain quantity of cement every eight seconds, was originated and is employed exclusively by this Company.

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Annual Output 10,000,000 Barrels



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OF  
PORTLAND CEMENT  
Lightest in Color  
Highest Tensile Strength

### ALWAYS UNIFORM

Always the same high quality. Prompt shipment guaranteed and made possible, as each mill is located within switching limits of the two greatest railroad centers of the West. You are assured of your orders being promptly filled.

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Open  
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Bates  
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## WATERPROOF

An Extra Heavy, Extra Strong  
WATERPROOF PAPER BAG  
For Cement, Plaster, Lime, Etc.

West Jersey Bag Co.  
Camden, N. J.

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**"THE BEST  
THAT CAN BE MADE"**

**SOLD BY ALL REPRESENTATIVE DEALERS**

**MEACHAM & WRIGHT COMPANY**  
**CEMENT**  
**CHICAGO**



## "WOLVERINE"

The Alright Cement

MADE RIGHT SOLD RIGHT  
WORKS RIGHT  
WEARS RIGHT

The Best Is None Too Good For You.  
Insist Upon

## "WOLVERINE"

Write for Booklet and Quotations.  
Factories at Coldwater and Quincy, Mich.  
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"All Manner of Tests on all Classes of Material"



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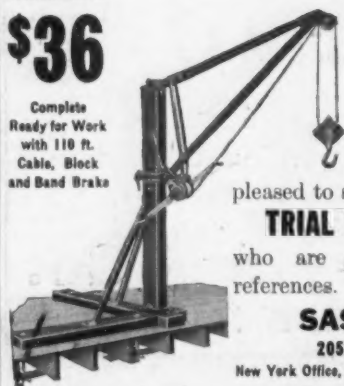
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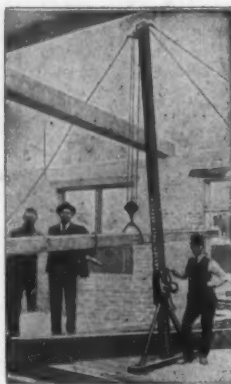
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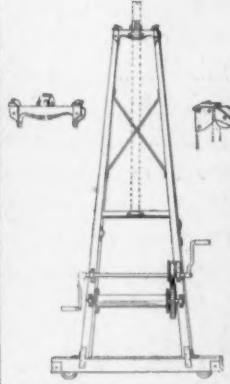
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DERRICKS will do  
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pleased to send them on  
**TRIAL TO CONTRACTORS**  
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**SASGEN BROS.**

2053 Racine Ave., Chicago  
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18 ft. Pole Derrick, complete  
as above shown, except guy  
lines, including \$26.50  
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18 ft. Setter Derrick with  
latest improvements as  
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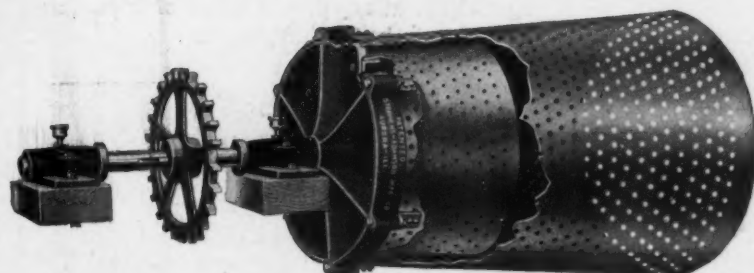


18 ft. "A" Frame Derrick, complete  
as shown above, ready for hoisting.  
With geared winch for 1½-ton  
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\$48.00

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The Improved Gilbert Screen—Patents Granted.

**The Inner Skirt.** In the operation of this screen, the gravel is delivered by the chute to the extreme interior of the screen. The greatest wear on the perforated plate is accordingly on the section near the cast iron spider. To relieve the plate of this wear a short inner skirt has been provided which takes the wear of the gravel as it drops from the chute. This skirt is easily removed, and is inexpensively replaced by a new one, when it becomes worn. The perforations in the skirt are of the same size as those in the outer plate and the screening operation is accordingly the same.

**The Attachment Clips** provide a simple means of attaching or removing the screens from the spider. Six bolts, through lugs on the spider and through angle clips on the plates fasten them rigidly together and the operation requires only a few minutes.  
(We invite your correspondence).

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Conveying, Screening, Transmission Machinery

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## Cement Question

Dealers, contractors, and engineers in the Middle West are studying the cement question from new angles. The wisest ones are going behind the "Standard Specifications," having found that Superior, for example, far out-tests them, chiefly in fineness and in low magnesia. These two essentials of a true Portland cement are coming into greater prominence every day, and are being given due weight in the choice of a cement for work that must endure. The logic of experience strongly favors the dust-fine, low-magnesia product. Such is Superior. Use it—always. Ask for our free "Superior Catechism" No. 7.

Union Trust Bldg., Cincinnati, Ohio

JUSTUS COLLINS, President

The Superior Portland Cement Co.

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Washed-Steam Dried and Screened

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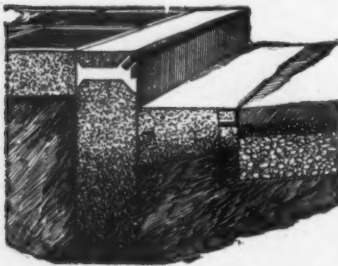
**FOR PROTECTING EDGES OF CONCRETE CURBS, STEPS, COLUMNS, ETC.**

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March 26, 1907  
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This bar is SELF ANCHORING, the DOVETAILED WEB holding it firmly in place EVERY INCH OF ITS LENGTH, requiring no clips, bolts or wires at intervals, allowing buckling or expansion, causing loosening of curved plates or other devices, which form no permanent protection to the curb. This bar presents a RESISTING DEPTH of nearly AN INCH OF SOLID STEEL, at any possible point of impact, as compared with other devices using seldom more than one-eighth of an inch of resisting surface.

It has a record of ten years' use without failure when laid in accordance with our printed directions, which will be sent to any engineer or contractor who desires them.

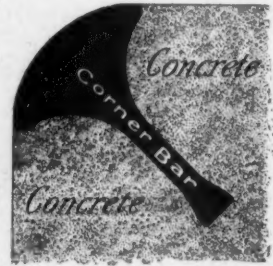
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**ABSOLUTELY NON-BREAKABLE**

**CHEAPER THAN GRANITE**



**GALVANIZED STEEL CORNER BAR**  
prevents Chipping or Breaking on Edges

**MECHANICALLY PERFECT AND  
UNEQUALLED FOR CURVED CORNERS**

**THE BEST IN THE WORLD** OVER THREE MILLION FEET IN USE IN MORE THAN  
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## THIS CURB WILL STAND HARDER USE AND LAST TEN TIMES AS LONG AS PLAIN CONCRETE CURBING


CONTRACTORS can make money by laying this curb.

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ARCHITECTS are invited to read pages 242 and 243 "Sweet's Index."

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FOR ALL SIZES OF GYRATORY CRUSHERS

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**PERMANENT and THOROUGH  
Water-proofing of Cement Work  
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## Maumee Compound

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TRADE MARK.

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## NEW MEMPHIS STATION.

Three Large Concrete Tunnel Under the Station the Feature of the Large Depot.

The Memphis Union Station, of which Rock Products is enabled to furnish the first photo showing the building in a practically completed condition, as it will appear from the exterior, stands three stories high, 300 feet front by 100 feet deep, with an express building 200 by 60 feet adjoining the main building. The exterior of this building is faced with Bedford stone furnished by the Henry Struble Cut Stone Company of Chicago, and contains about 40,000 cubic feet. The interior marble was furnished by the Blue Ridge Marble Company, of Nelson, Ga. The tile was furnished by the Rookwood Tile Co., of Cincinnati, Ohio. The hollow tile and floor arches by the National Fireproofing Company. The ceiling of terra cotta was furnished by the Atlantic Terra Cotta Company of New York. The roof tile was furnished by the Ludwici Tile Company. The ornamental ironwork was furnished by the Flour City Ornamental Iron Works, of Minneapolis, Minn., and the plumbing was installed by the M. F. Rourke Company, of Knoxville, Tenn.

Reference should be made to the concrete underground tunnels leading from main station through the terminal yards to the cars. Nothing but concrete work shows in these, and they are very handsome. There are three large tunnels.

The Royal cement used in the station was furnished by the Fischer Lime & Cement Company, of Memphis, Tenn. The face brick by the Sibley-Menge Brick Company, of Birmingham, Ala.

The structure and terminals cost around \$4,000,000, and it faces on Calhoun street, north and about one block east of the old Union Station. Work has been in progress about a year, and this construction represents a demand that has gone up for years. All the railways that make this a center will enter except the Illinois Central, which is shortly to start building its own station, at the corner of Calhoun and Main, on the site of the old station.

Murch Brothers Construction Company, of St. Louis and Memphis, had the general contract for the Memphis Station. Sub-contracts were: Tar and gravel roofing, Bartholomew Roofing Company of Memphis. Tile, Hegan Manufacturing Company, Louisville, Ky. Brick and terra cotta, Kiel & Dawes, of St. Louis. Structural steel, Noelka & Richards, of Indianapolis, Ind. Plastering, James Alexander Plastering Company, of Memphis, Tenn.

The Neville Concrete Company, Pittsburg, Pa., obtained a charter under Pennsylvania state laws August 16; capital given, \$50,000.00.

## NEW YORK CONCRETE NEWS.

New York, September 12.—The contract for the construction of a reinforced concrete warehouse six stories in height, 130 by 75 feet, for the American Dock and Trust Company at Tompkinsville, S. I., has been awarded to the Turner Construction Company, of 11 Broadway, New York City. They have also been awarded the contract for the construction of a reinforced concrete building for the Chesebrough Manufacturing Company, to be erected at their Perth Amboy, N. J., plant. The building is to be three stories high, 120 by 130 feet.

The Hennebique Construction Company, of 1170 Broadway, New York City, has been awarded the general contract for the construction of a seven-story reinforced concrete factory, 100 by 125 feet, at Nassau and Flatbush Avenue, Brooklyn, N. Y., for the Carey Manufacturing Company, 19 Roosevelt Street, New York City.

A reinforced concrete plant will be erected for the Simplex Automobile Company at New Brunswick, N. J., by the Torrington Building Company at Torrington, Conn. The structure will be two stories high, 66.6 by 392 feet, with two elevator towers three stories high, 21 feet 6 inches by 6 feet. Cost is \$100,000.

The Turner Construction Company has received the general contract to erect an addition to the three-story reinforced concrete plant of the Republic Metal Ware Company, of Buffalo, N. Y. The architect is Colson Hudson, 35 Dun Building, Buffalo, N. Y.

John McKeefry, of 1416 Broadway, New York City, has been awarded the contract to erect a seven-story fireproof reinforced concrete storage building at 90 Gansevoort Street, New York City. The architect is J. S. Glover, 160 State Street, Brooklyn, N. Y.

The Amsterdam Building Company, of 10 East Fifty-fourth Street, have been awarded the general contract to construct a manufacturing plant for R. U. Delephens & Co, on the New York Central road at Gill Place, about three miles south of Poughkeepsie, N. Y. The main building will be of reinforced concrete, 100 by 400 feet. The architect is P. M. Lloyd, 1 Washington Street, Poughkeepsie, N. Y.

The Pennsylvania Railroad has constructed a reinforced concrete pole line designed to carry sixty serial wires and two 1½-inch diameter lead-encased cables for its telegraph and telephone circuits on the north side of its tracks across the five-mile stretch of swampy meadow land in New Jersey, to avoid interruptions by severe storms or fires from meadow grass, between Manhattan Transfer and the portal of the tunnels leading into the new passenger station in New York City.

J. G. O'Brien, of Wallingford, Vt., is in the market for a concrete block machine and mixer.

## THIRTY YEARS AGO

Interesting Comparisons of the Cost of Building Then and Now—Why It Costs More to Build Today.

A very large majority of the prospective home builders cling to the old idea that a six or even a seven-room residence can be built for the sum total of \$2,000.00, or at the most \$2,500.00, and this is supposed to cover all of those conveniences which are grouped under the phrase "modern equipment." Just about a generation ago the average American home was built for that much money. Ninety per cent of those who read these lines were born and reared in a house that cost between \$2,000.00 and \$2,500.00.

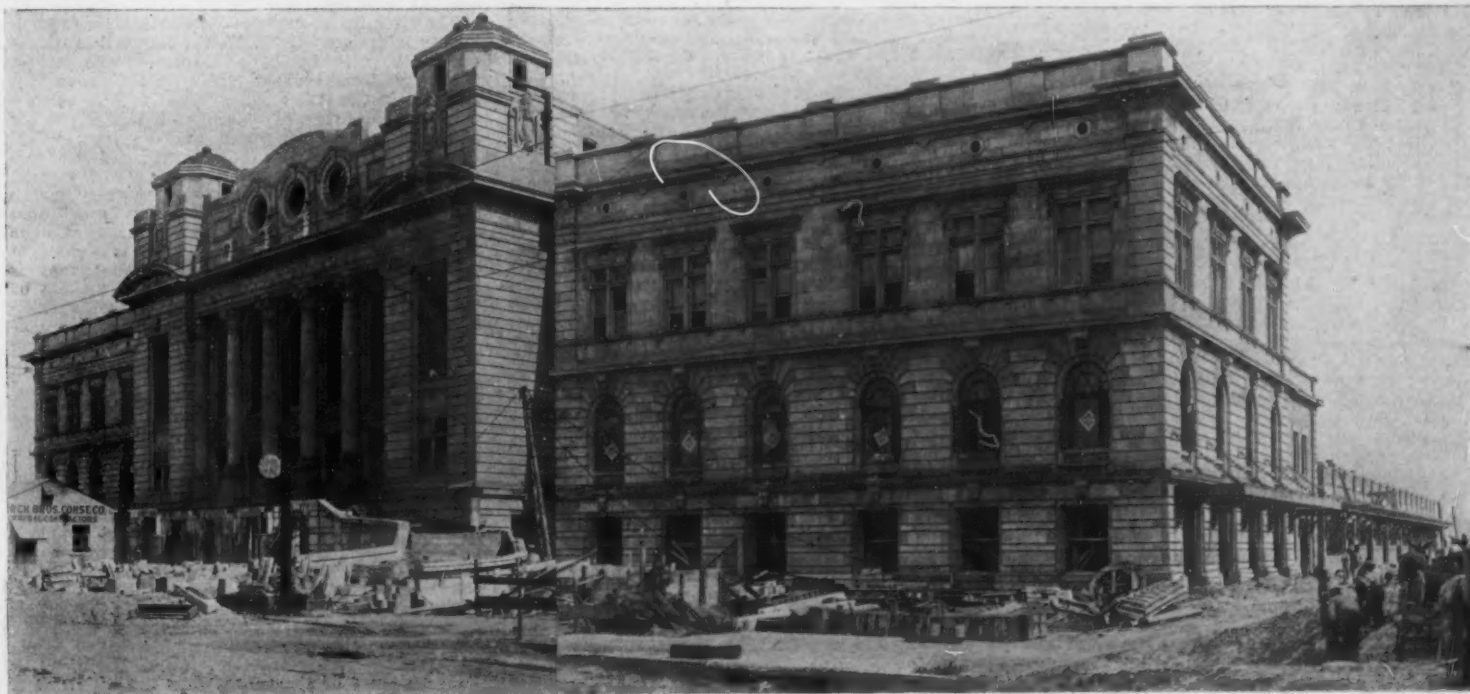
There is not a building material man in this country who doesn't hear the remark daily: "Building materials cost about double what they used to," and this is drummed into them so steadily that the majority are ready to admit that such is the case.

Nothing could be farther from the truth, for as a matter of fact every item of equal quality that goes into the building costs less than it did two or three decades ago, with the two prominent exceptions of labor and lumber.

In looking over the bills of a house that was built in August and September of the year 1877, we find the following items: Brick, \$12.50 per 1,000 (we would call them commons); Louisville cement, \$3.25 per barrel; sand, \$1.25 per load (about three-quarters of a yard delivered in a dump cart; it came from the bank and had to be screened on the job); rubble stone, \$15.00 per cord; lime, \$2.00 per barrel; Michigan pine timbers, \$17.00 per 1,000 feet; rough inch boards, \$12.50 per 1,000 feet; shingles, \$2.75 per 1,000. On this same job carpenters were paid \$2.75 per day; bricklayers \$3.00, and plasterers \$2.50. Yet this seven-room house was completed for the sum of \$2,475.00.

Analysis and comparison of these figures are both interesting and instructive. For instance, the total bill for lumber on this house, including all the trim, was \$665.00, while the same specifications figured by a Chicago dealer last week, allowing for the substitution of stock now carried in place of the clear white pine that was available thirty years ago, the tender to furnish the material amounted to \$1,788.00. The items of brick, cement, lime, rubble stone and sand have decreased in almost exactly the same ratio as the lumber and wooden trimming material has advanced—and the items of cement and lime have undergone greater improvement in the meantime than lumber has gone off in quality.

The lesson is plain enough—the lumber and



NEW UNION DEPOT AT MEMPHIS, TENN.

wooden trim specifications take up about three times as much money as the house in which you were born, and the lumber now offered in the market is no better than seconds of the period mentioned. On account of the poor quality of the lumber now available, more hours of high-priced labor is required to hack and thump it into a passable job. This is said advisedly, for with the clear, straight boards of thirty years ago, one could observe some considerable progress on the job each day, which is not always the case today.

There is no sane reason for harking back to the impossible past and insisting on having everything made out of wood that is possible to use that material for, mainly because father found it cheaper than anything else when you were a boy, and the conventional idea you formed then still clogs your vision.

It is time for an awakening to the opportunities of the present day. A better house than was possible at any price ten years ago can now be built of better and cheaper materials than your father ever knew about. Just cut out all the wood and wooden trim, and see how much more money there will be left in the average building appropriation to pay for the indispensable bath room, kitchen outfit, etc., which was unknown in father's day.

Take a lesson from father, if you will. He made the widest use of the cheapest material, as he found in the markets of his day—that was wood. The cheapest materials in this day are cement and concrete made of cement—for the structural part of your house—and the decorative values of lime and plaster outrank anything that has ever been possible in wood. The question presents itself, Are you as wise as father? Are you making the greatest possible use of the cheapest available materials?

Another thought, because father was forced to use wood he invented fire insurance to cover the deficiency of the material. Now, is it exactly needful for you to perpetuate that kind of taxation and bequeath it to your children after you, when the first and principal cause for its institution has been removed by modern inventions and improvements?

Barring the wooden part of your building, the house at \$2,000.00 or \$2,500.00 is just as easy to get now as it ever was—in spite of the enormous advance in the scale of wages paid in the building trades at the present time. Of course this does not include heating and plumbing, which must be considered outside of all comparisons in which nothing of the kind was included in one member of the equation.

What the prospective builder most needs is to be informed about the changes that have taken place and are constantly taking place in the improvement of building materials and building methods. The average business man who incidentally becomes a builder has little chance of learning such things for himself. While he is quick to recognize the changes in his own particular line, he does not consider that he is living in a house that cost \$10,000, while his parents were quite as well off in one that only cost one-quarter of that amount.

Simply this, father was abreast of the times in which he lived, and he profited thereby; the business man of today is a specialist, behind the times in all but his narrow activities, and so when he goes to build he generally gets the worst obtainable at the highest price—he pays more than father and gets less.

#### PITTSBURGH CONCRETE NEWS.

Pittsburgh, Pa., September 18.—The big improvements going ahead on the North Side and also the South Side, together with the proposed reduction of the hump, are bringing on to the boards of architects and engineers quite an amount of reinforced concrete work. Most of this will be let this fall. Some of it, however, will be hung over until next spring. Engineers are considerably encouraged over the increase in this sort of inquiry, and believe that next spring will see one of the best seasons for concrete work ever known in Pittsburgh.

The Structural Concrete Company, of McKees Rocks, Pa., has the contract for building a concrete reservoir 88x110 at River and Heinz avenues, north side, for the H. J. Heinz Company, at a cost of \$30,000.

City Contractor John F. Casey is making fine progress on the Larimer avenue concrete bridge in the East End, which he is building for \$140,000. The bridge will be 300 feet long and 50 feet wide, with a 30-foot roadway, and will have the third longest concrete arch in the world.

The Neville Concrete Company, of Neville Island, Pittsburgh, has the contract for the ornamental concrete work for the big pattern forge building and

pattern shop of the General Electric Company at Erie, Pa. The building will be 75'x400' and six stories high.

Public Works Director Joseph G. Armstrong has appointed a committee of councilmen to determine the location of the piers of the Bloomfield Bridge Company, over Junction Hollow, for which \$500,000 was authorized last year. It will be one of the biggest concrete structures in this section. Another city project which is going ahead shortly will be the P. R. R. project to widen Fifth avenue extension to 60 feet where it runs along the East End railroad tracks.

The new foundry of Spang-Chalfant & Co., at Etna, Pa., is built almost entirely of reinforced concrete. The building was planned by Engineers Irvin & Witherow of this city, and the B. A. Groah Company has the contract. It is two stories high and 417'x100' at one end, with an L 250'x100' and three story office building 60'x100'. There are reinforced concrete foundations from 20 to 46 feet deep. Twenty-two hundred car loads of plaster and furnace slack have been used to put it out of flood danger and ten feet above the present street level. Nothing but concrete and steel is used in the construction.

The Dravo Contracting Company has the contract for the piers and abutments for the North Side Point bridge at the mouth of the Allegheny river. They will be carried to bed rock by pneumatic process and will be of concrete construction with a stone facing.

The T. A. Gillespie Company has the contract for work on the New Martinsville and Woodland dams on the Ohio river, and also Dam No. 1 below Midland, Pa. The total concrete work on the last job calls for 500,000 sacks of concrete.

Chester & Fleming of this city are preparing plans for a reinforced concrete viaduct across the deep gorge in the borough of Monessen, Pa. It will have a span of 150 feet.

The P. R. R. is using concrete poles considerably this year and finds the experiment very successful. Recent reports indicate that a large number of these poles will be placed in the Pittsburgh district soon. They are placed 300 feet apart and are meant to carry seven transmission circuits. Each pole is supported by concrete foundation built on the top of groups of from 60 to 90 foot piles driven down through the earth.

#### PHILADELPHIA CONCRETE NEWS.

Philadelphia, Pa., September 19.—Although there has been no robust forward movement in the cement situation within the month, the general tone in wholesale centers is obviously much improved. The figures show that 806 permits for 1,359 operations were issued in August at a cost of \$4,660,185.00; a large increase over the corresponding month of last year, when only 775 permits for 708 operations, representing an expenditure of \$2,634,265.00, were issued. The total figures so far this year show an expenditure for all kinds of construction work amounting to \$31,941,015.00. For the first eight months of last year, totals were \$28,369,900.00. It is believed that total figures for whole of this year will be \$40,000,000.00. Among the concrete construction being planned and those in process of erection may be mentioned the following:

A. Hartung & Co. are having plans prepared by C. P. Berger, architect, for an 8-story warehouse to be erected at 506-510 Race street. The building will be of concrete, brick and steel, 70 by 170 feet in dimensions.

Architect Horace Trumbauer has begun the preparation of plans for a \$1,000,000.00 hotel, which will be erected on the site of the present Windsor Hotel, Illinois avenue and the beach, Atlantic City, N. J. The hotel will be of fireproof construction, with exterior of brick, terra cotta and concrete.

The Pennsylvania Railroad recently awarded contract to the Eyre-Shoemaker Company, Philadelphia, for the erection of an 11-span concrete arch bridge over the Schuylkill river at Douglassville, Pa. The spans of the new structure will be 57 feet each. The cost is estimated at \$90,000.00.

Durham Brothers recently completed plans for a 2½-story house of concrete blocks, to be built on Claridge street. Fox Chase, for George Belmeister.

Heacock & Hokaanson, architects, are preparing plans for a 3-story concrete addition, 40 by 60 feet, to the plant of the Henry H. Sheip Manufacturing Company, at Sixth street and Columbia avenue.

The Gadsden Concrete Company has been organized at Gadsden, Ala., with a capital stock of \$10,000.00 to establish a plant for the manufacture of building blocks, sewer tile, sills, etc. A steam curing plant will be installed. The incorporators and officers of the new concern are as follows: W. R. Moore, Birmingham, Ala., president and general manager; E. C. Little, Gadsden, Ala., vice-president and treasurer.

#### BIRMINGHAM CONCRETE NEWS.

Birmingham, Ala., Sept. 16.—The Scheiber Concrete Roof Tile Co., of which W. A. Biles, manager of the Southern Mosaic Tile Co., is the largest stockholder, is the name of a new concrete roofing concern incorporated a few days ago with a capital stock, all paid in, of \$100,000.00. The officers of the new concern are to be W. A. Biles, president; Arthur B. Biles, secretary and treasurer, and W. J. Cuniff, attorney.

The offices of the company are to be at 319 Chamber of Commerce building, where the Southern Mosaic Tile Company has its offices.

The plant of the Scheiber Concrete Roof Tile Company is to be located in East Birmingham, where a location has already been purchased and the construction of the plant is now under way. The equipment of the plant will be modern in every respect and operations are to be begun very shortly. A force of about sixty men is to be employed, this number to be increased from time to time as the business demands.

The output of this plant is to be a shingle 12x12 inches in size, made of sand and cement. Numerous patterns or designs will be manufactured.

The Steel Moulds Concreting Co., organized for the purpose of handling the patents of the Morrill Moulds Corporation of Washington, D. C., in the state of Alabama, is a concern recently incorporated in Birmingham. The company is capitalized at \$2,000.00 fully paid, with the privilege of increasing to \$50,000.00. The rights to the Morrill steel moulds patents have already been secured and the organization of the Steel Moulds Concreting Co. has been perfected with H. E. Shropshire, president; R. W. Knight, vice president; E. Knight, general manager, and W. A. Shropshire, secretary and treasurer.

The contract for the new city jail of Birmingham, designed by H. B. Wheelock, architect, will be constructed by these patents, it is authoritatively stated. The plans for the jail have been accepted by the board of commissioners of the city and bids are being received now, estimates to be based upon the use of the Morrill moulds. The new city jail will be three stories in height and will be constructed entirely of concrete.

The movement to abolish the future use of wooden shingles has gained great headway in Birmingham and a public meeting was recently held by the board of commissioners composed of Messrs. Culpepper Exum, president, James Weatherly and A. O. Lane, associates, at which many arguments in favor of the movement were advanced by the manufacturers and dealers in fireproof roofing of various kinds.

Among those who appeared before the commission were Messrs. Robert Fulenwider, president of the Fulenwider Building Material Co.; W. A. Biles, president of the Scheiber Concrete Roof Tile Co.; W. W. Sneed, of the Carolina Portland Cement Co.; E. H. West, of the Alabama Roofing Co.; Harry Fulenwider, of the East Birmingham Roofing Co., and representatives of other concerns engaged in manufacturing tile and cement roofings, though without local agents.

The situation is explained somewhat by the following interview with J. Mercer Barnett, president of the Barnett Lumber Co., one of the largest dealers in lumber of all kinds, including wooden shingles, in the state:

"I am in favor of the wooden shingles being abolished. I am convinced that our city would be greatly benefited by the ordinance being passed requiring fireproof roofing. Our company sells many thousands of cypress shingles every month and from a standpoint of financial gain it would certainly not pay to have wooden shingles done away with. However, I do not propose to stand in the way of the best interests of the people of Birmingham by advocating the continued use of the wooden shingle simply because I am making some money selling them.

"Fireproof roofing costs very little more than wooden shingles, but even at that wooden shingles are more expensive as there is always repairing to be done, the service is poor as compared with fireproof roofing, and there is the all-important danger of fire with a shingle roof. With a shingle roof insurance rates are also higher.

"No; the wooden shingle is a relic of the past. It has served its purpose, in the absence of better material. It is bound to give way to such fireproof products as asbestos, asphalt, metal shingles, tile, slate, etc., just like the candle gave way to the electric light and the ox-cart to the trolley car."

Naturally the lumber interests of the entire state are vigorously opposing the movement, but the concrete, tile, metal and prepared roofing people are standing solidly together. Furthermore, A. V. Bennett, chief of the Birmingham fire department, is actively favoring the idea and all insurance interests are encouraging it, which, it is thought,



will lead to the adoption of an ordinance prohibiting the use of wooden shingles within fire limits in the future at an early date.

James Long, Birmingham contractor, has been awarded the contract for building the reinforced concrete dam across Black Creek at the Acmar mines, for which Motley & Dryer are the engineers. This dam is to supply the water for huge washer there.

The Birmingham office of the National Mosaic Flooring Company, with M. J. Brennen in charge, has secured a great number of orders recently, the largest of which are the tiling of the floors in the three-story and basement building of the Birmingham Ledger and the tiling of the floors in the building of the Birmingham Athletic Club.

The plant of the American Concrete & Steel Tie Co., which has its general offices in the Brown-Marx building, this city, has been practically completed and it is expected that operations on a heavy scale will be undertaken very shortly. A limited output has been going on for several weeks, but the new plant, which will cost \$50,000 when complete, ready for full operation, will be run full capacity as soon as possible.

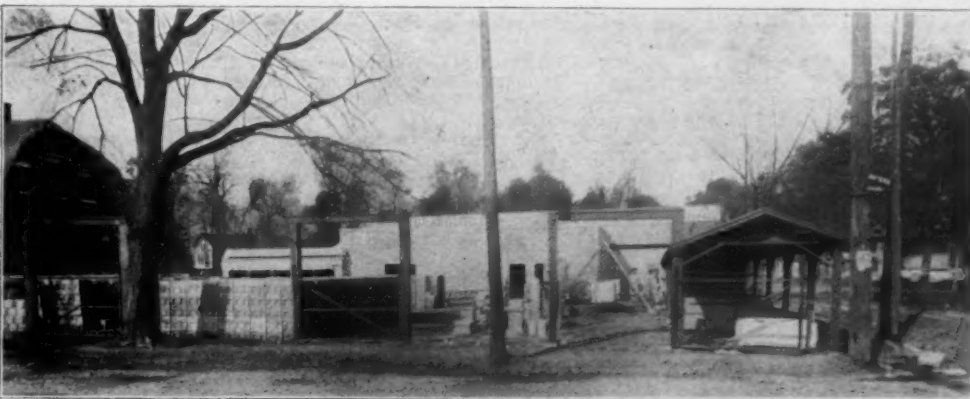
It is understood that plans are now on foot to make the temporary plant of the American Cement Tile Manufacturing Co., at Corey, a permanent addition to the industrial enterprises of Birmingham. The home office of the American Cement Tile Manufacturing Co. is located at Wampum, Pa., and other branches are at Lincoln, N. J., Crystal City, Mo., and Copper Cliff, Canada, while the general offices are at 29 Broadway, New York City.

The plant here in Birmingham, which is located at Corey, was erected and equipped solely to supply the material required by the gigantic projects of the United States Steel Company in the Birmingham district and it was the original intention to dismantle and abandon it as soon as these needs were fully supplied. However, it has developed that large deposits of the raw materials required for the manufacture of this tile, a cement product, are closely adjacent to the plant and as transportation facilities are eminently satisfactory, the plans for converting the temporary plant into a permanent one are now really understood to be under headway. The changes necessitated by this action mean improvements involving thousands of dollars.

Messrs. I. L. Meyers, of New York, and Jos. Freund, of St. Louis, president and vice president, respectively, of the American Cement Tile Mfg. Co., are now in Birmingham and in a statement made by the latter to a representative of ROCK PRODUCTS, the assertion was made that the adjacent deposits of raw material, favorable freight rates and facilities and the unexpected development of the general demand for the product of the company was practically forcing the establishment of a permanent factory here, and if nothing untoward became apparent the work of converting the present plant would shortly be inaugurated.

The announcement is made by the Rossland Development Co., which recently located the Birmingham Tie & Creosoting Co., a \$100,000 enterprise, on its new town site, Rossland, about twenty-five miles from Birmingham, that plans for the organization of the Southern Plate Glass Company had been practically completed.

The Tuscaloosa Concrete Company has practically completed the construction of the new fertilizer plant of the Tuscaloosa Cotton Seed Oil Co. and as soon as completed the large force of laborers now employed will be engaged on the heavy street and paving contracts recently awarded this company by the new commission form of government which Tuscaloosa recently adopted.



WORKS OF THE MEMPHIS GRANOLITH COMPANY, MEMPHIS, TENN.

#### THE MEMPHIS GRANOLITH COMPANY.

The pictures appearing on this page illustrate some of the work done by the Memphis Granolith Company, of Memphis, Tenn., whose factory is located corner of Rayner and McLemore streets. C. W. McDaniel is at the head of the company and started it when he came to Memphis, about eight years ago from Indiana. It has been one of the successful companies that has done concrete block work in Memphis, and accordingly the exception. The residence illustration, apartment home and the factory itself show up very well. The architectural pieces are artistic and the color good. At the factory Mr. McDaniel makes under his own patent a burial vault, one solid piece, all reinforced with steel bars imbedded in the concrete. Porch columns, Pompeian and Grecian flower urns, gate piers and balusters are also turned out at this factory.

#### LOUISVILLE CONCRETE NEWS.

Louisville, Ky., Sept. 15.—With a record-breaking building year literally staring them in the face, a smiling aggregate of more than \$5,000,000 worth of prospective building, the Louisville concrete working trade could not very well help being both busy and satisfied. The activity of the past month has been in distinct proportion to the big totals of permits issued every week by the officials in the City Building Inspector's office. Big contracts have been plentiful and small jobs have been bountiful, with the result that there is not an establishment in the city which does not report "fine business" and is not working to capacity limit to live up to its report.

"We are handling all the business we can possi-



RESIDENCE OF J. H. DRAYTON, MEMPHIS, TENN. BUILT OF CONCRETE BLOCKS.

bly attend to," said W. H. Hampton, secretary of the Culley Cement Block Company. "The porch construction and column end of the trade is doing fine for this season, the prospect of cold weather approaching does not seem to have deterred numerous residents of the city from having bids placed upon porch work for their homes."

The Culley Cement Block Company installed a very attractive exhibit at the Kentucky State Fair September 11-16 and pronounces the venture to be one of the most successful advertising stunts yet pulled off by the concern. A miniature concrete block manufacturing plant was installed and visitors were presented with small blocks which it



RESIDENCE OF C. W. McDANIEL, MEMPHIS, TENN. BUILT OF CONCRETE BLOCKS.

turned out. The educational feature made a tremendous "hit," and Culley blocks were in big demand throughout the grounds. An array of concrete porch columns was also on hand, and active demonstration along this line brought fine results from the out-of-town callers.

Residence work is forming a feature of the generally good volume of business of the Central Concrete Construction Company, according to C. G. Mazzoni. The Central company is working upon a very handsome concrete balustrade surrounding the grounds of the Wible Mapother residence on South Third avenue, a number of specially constructed pedestals, etc., being brought into play. Concrete work of Central execution upon the residence and walks of Charles C. Stoll in the Highlands amounts to about \$5,000, while the J. C. Fedler bungalow has just been completed, a new sort of stucco job which is the first of its kind in Louisville, costing about \$4,500. The Frank Davis residence in Crescent Hill, an entire concrete job, is also being done by the Central force. Mr. Mazzoni reported that his company is to install a new stucco block machine in the near future to accommodate increasing demand along this line.

Sam L. Robertson has nearly completed the big concrete roof which is a feature of the new fire-proof powerhouse of the Louisville Cotton Oil Company's refinery. The reinforced foundations for St. Augustine's Catholic church have also been laid by the Robertson force within the past month and several smaller jobs have been handled. One of the most unique contracts awarded to Mr. Robertson was that for a gateway building which will guard the grounds of the Trappist order in Nelson county, Kentucky. The Roman Catholic monks have planned a very handsome concrete structure, 187'x30', one story high, which flanks the entrance way to the monastery and is now in course of construction under the supervision of Mr. Robertson. The West End concrete worker says that he is figuring on the installation of considerable new equipment as soon as the off-season permits work along this line.

The Unit Brick & Tile Company reported a steadily growing amount of trade. The Unit concern is specializing in out-of-town work at present and is handling several good-sized jobs throughout the state.

The Tycerete Concrete Company, a new corporation which started a concrete block plant about a month ago at Fourteenth and Oak streets in Louisville, is handling its first job, a large contract for the erection of an up-to-date office building for the Atlas Coal Company on the river front. Tycerete affairs have been growing steadily since the introduction of an up-to-date concrete products exhibit at the Kentucky State Fair. The Fair display showed a full line of waterproof building materials, fence posts and drainage tile and developed a lot of advertising for Tycerete goods with the thousands of rural visitors. The outlook for the new concern is exceptionally bright, judging from the amount of prospective work which it has pretty nearly "cinched."

James T. Allen & Son, plasterers, 212 South Tenth street, one of the oldest and most reliable concerns of its kind in the East, state that they have all the work they can handle at this time, among which are some large buildings requiring special ornamental plastering.

## BUNGALOW

Built of Concrete in the Chicago District at Reasonable Cost Demonstrates That This Type of Home Is Within the Reach of All.

Possibly there will never be an end to the interest in the economy of home building. Naturally as the first grand essential for the comfort and happiness of the human unit under organized civilization the house in which the family makes its home is important to every member thereof.

The best obtainable at the lowest cost has been the quest of progressive peoples, and the kind of homes they inhabit marks the character of the people more, perhaps, than any other one thing.

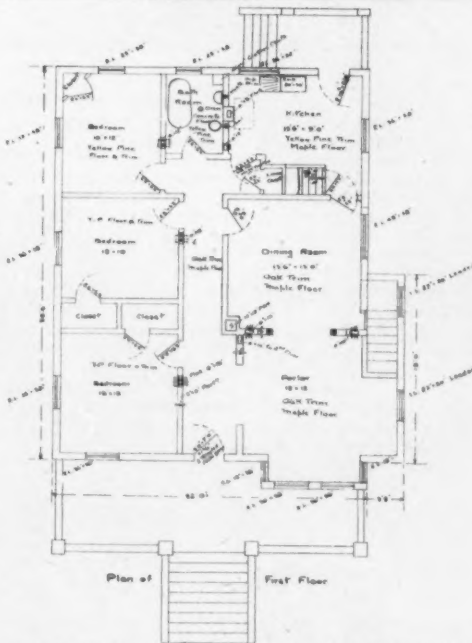
We in this United States of America are just passing out of an era when wooden constructed houses were the cheapest and only obtainable kind that could be considered by people in average circumstances. This is proved by the statistics which show that almost ninety-eight per cent of all the dwellings of the country are entirely of wooden construction.

Building woods are passing very rapidly, nay, they have already gone, although the fact is hard to realize as yet by numbers of people who cling to the examples of the past, and still insist upon considering wood as a cheap commodity when in fact it is the most costly building material obtainable, with the cost continually rising by leaps and bounds, while at the same time the quality is decreasing in about the same ratio. For instance, 1,000 feet of lumber will only count for little more than half as much in a building constructed today as it would ten years ago, and it costs almost twice as much as it did at that time.

Concrete materials are rapidly taking the place of wood, and like all well timed improvements, the modern concrete materials introduce new advantages, bigger values and broader satisfaction than the obsolete material relegated to the rear.

As a prominent example of the progress of the times in which we live, the handsomely finished bungalow of Dr. A. A. Mahle built this season in Lemont, one of the prettiest Chicago suburbs, has been chosen. As will be seen from the illustrations this very neat residence is constructed almost entirely of concrete, all the outer surfaces being rough cast with cement grout of a fine grain. The foundations, walls, floors, partitions, etc., are built of concrete hollow tile manufactured by the Chicago Structural Tile Company. The wooden roof is the only important feature built of that material. Interior plastering is applied directly to the tile walls on the inside, and the tile and reinforced concrete floors are covered with thin matched hardwood flooring. The trim is in quartersawn oak, and the equipment is complete in every respect, including furnace, bath and plumbing outfit in both the kitchen on the main floor and in the basement kitchen, as well.

The house is placed on the brow of the bluff of the Des Plaines River and faces the east with a grand view of the valley from three sides. This house is in fact an elegant home from every standpoint, and it is unique in that it demonstrates the position long taken by Rock Products to the



FLOOR PLAN OF DR. A. A. MAHLE'S HOUSE, LEMONT, ILL.

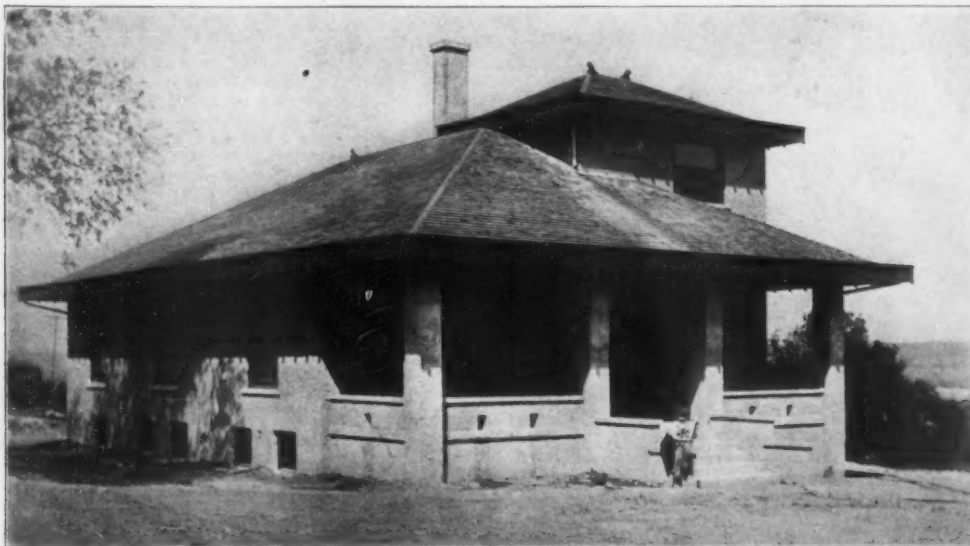
effect that it is no longer needful to assume the fire risks or endure the discomforts of wooden houses, which at best can only be considered as temporary structures.

All of the security and tremendous value of strictly fireproof construction may be had at the same price as a wooden house.

This splendid bungalow only costs \$4,500 in the Chicago district with all its appointments and equipment figured in. Such a statement would have been considered unreasonable only one year ago, but we have the assurance of the responsible contractors who put up this house that they will be ready to undertake the duplication of this bungalow any place in the environs of Chicago for the sum mentioned.

Dr. and Mrs. Mahle are people of refined taste who appreciate the high qualities of their new home and say that they rather enjoy the continuous reception of people who come to inspect the wonderful advantages of building with modern materials. There are numberless bungalows throughout this section that cost the owners \$6,000, \$7,000 and even \$8,000 which cannot be favorably compared with the one here under discussion. If we take into consideration the cost of upkeep, or count anything for the value of greater comfort in extreme hot or very cold weather any attempt at comparison becomes futile.

Such a house is within the reach of any builder who can pay for the cheapest possible home, and the same people who turned out this fine specimen will build as many more as are wanted. This is the one big opportunity right now available and large numbers of those people who count their chance and measure values intelligently when making investments are taking advantage of the same.



BUNGALOW OF DR. MAHLE, LEMONT, ILL. BUILT OF HOLLOW CONCRETE TILE, FURNISHED BY THE CHICAGO STRUCTURAL TILE COMPANY.

## BEAUTIFUL

Examples of Concrete Plaster Houses in the Southern Environs of the Great Western Metropolis—Moderate in Price but Perfect in Appointment.

The suburbs in the southern outskirts of Chicago are well advanced in the use of cement in house construction. There are more moderate cost houses in this district than on the north shore. It is the moderate cost house that appeals to the masses and is within the means of the ordinary man. The individual small house does not mean much to the material man, but in the aggregate they amount to more than the large buildings.

Dwellers in the city are rapidly going back to the old-fashioned idea that life is only worth living in one's own home. They are beginning to realize that the wife and children have an inalienable right to a home of their own. It is the normal way of living and it is abnormal to live in rented apartments.

The home builder has come to a realization of the fact that it does not pay to build a cheap, flimsy house. He is coming to know that a few extra dollars put into cement means a large saving to him in the long run for the maintenance of his house. It is true that the cement house "costs more at the start," but the cement house is true economy for the reason that in ten years it will be as good as new while the frame structure that cost less will be old and dilapidated. That point the wise man must take into consideration. It is only a new adaptation of the biblical story of the man who built his house on the shifting sands.

Down on the south shore there are many examples of beautiful house construction with cement. This section of the Chicago suburban district is growing fast and next year promises to be a record breaker in home building. It is generally understood that building materials never will be any cheaper than they are today and the man who is intending to build a house has come to the conclusion that it will not gain him anything to wait for lower prices.

The houses here shown are typical in design of those to be found in the southern suburbs and it is well worth while to inspect them. The residence of Jordan B. Cottles, at 7114 Palmer avenue, near the South Shore Country Club grounds, is of the bungalow type so popular with home builders now. It is regarded as one of the most beautiful and artistic little houses in this section. The lower part of the structure has an exterior of undressed lumber that is stained and very dark color. The upper portion under the eaves is finished with a rough cast cement mortar that makes a beautiful contrast with the dark wood below.

At 10036 Longwood boulevard is another unique house in which cement is a prominent feature. It is the residence of O. W. Pague, designed by Architect H. H. Waterman. The cobblestones used in the walls up to the window sills give the impression of solidity and strength.

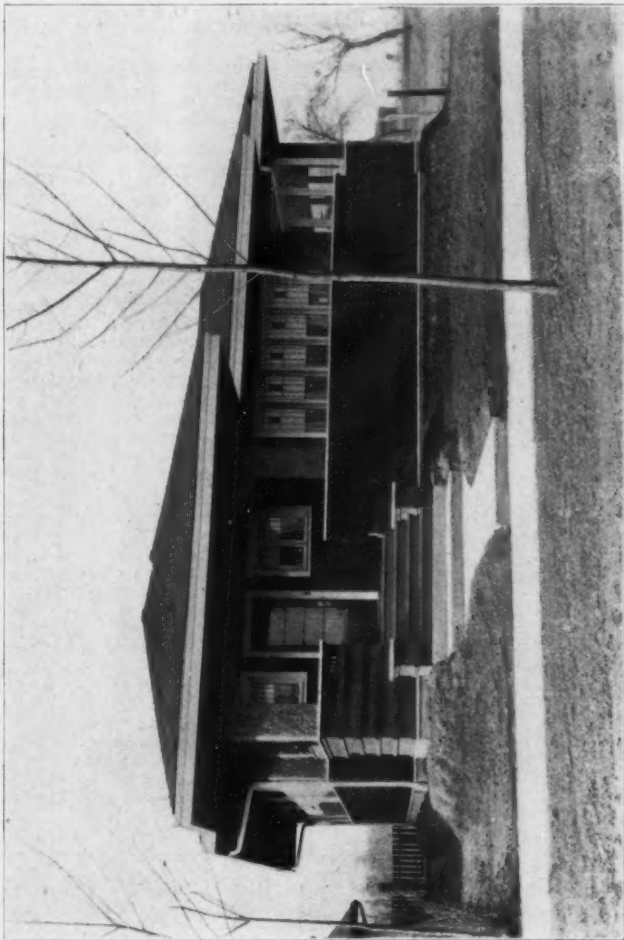
R. W. Evans has a handsome residence at 1757 West 102d street. It is a characteristic design of Frank Lloyd Wright, the Oak Park architect, originator of the "merry widow roof."

The residence of Nelson L. Buck, 9901 Longwood boulevard, is a handsome house designed by Architect F. M. Barton. There are many cement houses in this section of the environs of Chicago of this style.

It will be observed that these houses are of a character that assures their always being salable. The most important point to be kept constantly in mind in designing a house is the fact that at some future period it may be desirable or necessary to sell it. If the house is of the commonplace type and has nothing about it to recommend it above the ordinary it will be hard to sell. But if it possesses individuality and character it is always salable. The kind of house that is salable is the one that people turn and look at as they pass by. That is the kind of a house made possible by the use of cement. The method of construction employed in the houses shown here were practically the same in every case so far as the cement mortar was concerned. The exterior was furred and lathed and the scratch coat was then applied.

The Davenport Clay Manufacturing and Development Company, of Port Jefferson, L. I., has been incorporated to deal in brick, tile, stone and manufacturing, mining and quarrying, with a capital stock of \$500,000. The incorporators are: E. A. Reser, M. J. McLeod, of New York City, and F. B. Doe, of Brooklyn, N. Y.

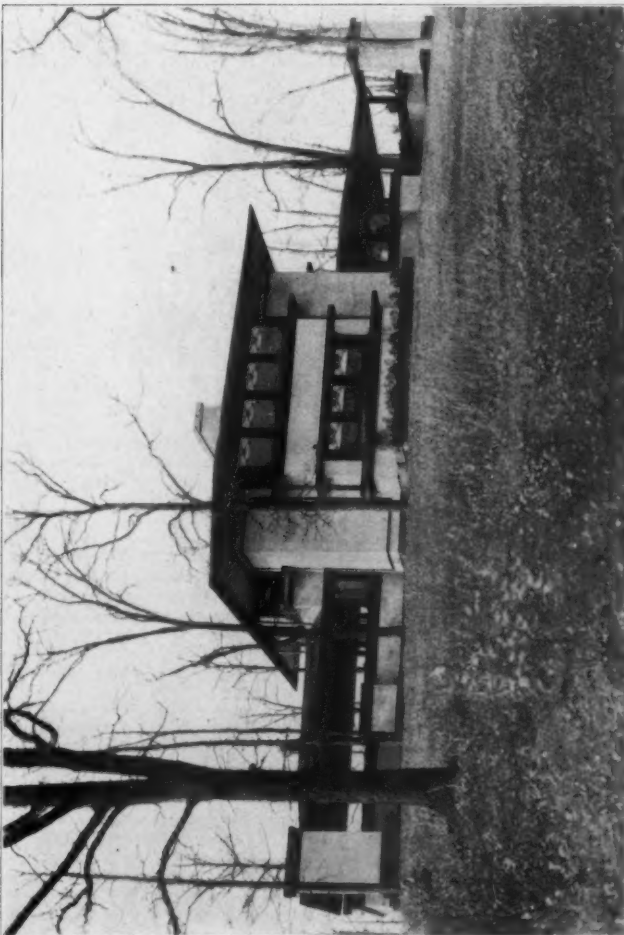




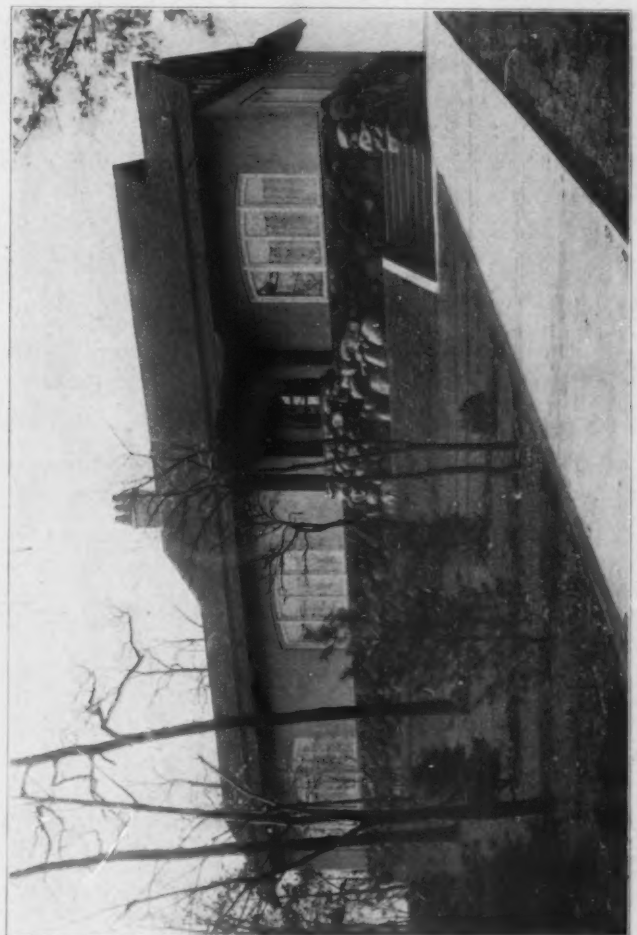
RESIDENCE OF JORDAN B. COTTLES, 7114 PALMER AVE., CHICAGO, R. W. CHAMBERMAN, ARCHITECT



RESIDENCE OF NELSON L. BUCK, 9901 LONGWOOD BLVD., CHICAGO, F. M. BARTON, ARCHITECT



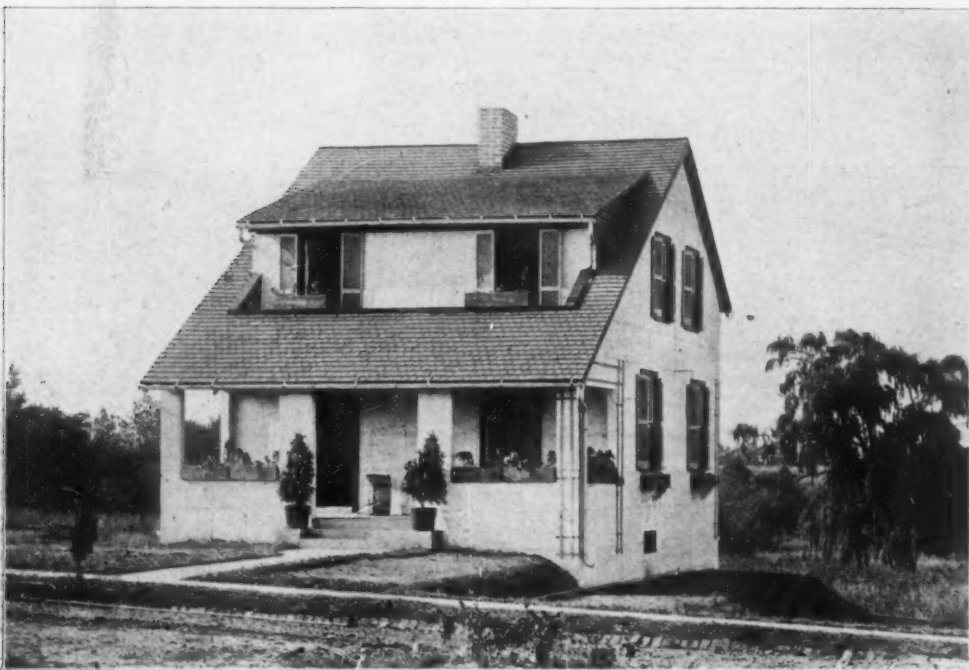
RESIDENCE OF R. W. EVANS, 1757 W. 102ND ST., CHICAGO, FRANK LLOYD WRIGHT, ARCHITECT



RESIDENCE OF O. W. PAGUE, 10036 LONGWOOD BLV D., CHICAGO, H. H. WATERMAN, ARCHITECT



CEMENT HOUSE AT VIRGINIA HIGHLANDS, VA., MADE WITH MORRILL MOULDS.



A COMPLETED POURED HOUSE AT VIRGINIA HIGHLANDS, VA.



POURED CONCRETE R. R. STATION, VIRGINIA HIGHLANDS, VA.

## POURED HOUSES

Milton Dana Morrill, the Washington Architect,  
Has Reduced the Cost of Concrete  
Houses to a Minimum.

Washington, Sept. 18.—Every day sees some advancement made in the practical use of cement. Problems remain to be solved, but the advancement made in the use of this material in structural work is nothing less than marvelous, and the capital of the nation is contributing its quota to the general welfare and stock of knowledge.

When Milton Dana Morrill taxed his architectural genius to plan a house for the competition by the International Congress on Prevention of Tuberculosis, in Washington, to determine on the best type of inexpensive, sanitary workingmen's homes, he did not know that it was the first step toward plunging into the business of constructing such houses. His design won the first award by the convention. So much interest was aroused by the exhibition of the model house that Mr. Morrill was impelled to devise a practical method of construction. The Morrill moulds were the result. Then a corporation was formed, 103 acres of land was bought twelve minutes' ride from Washington in a southwesterly direction, and there, at Virginia Highlands, the company started to build a cement village, each house occupying a lot 50'x115' in size. It has prospered and has sold many houses. Beside this it is building fifty houses at High Lake, near West Chicago. It has undertaken to build 420 houses at Budapest, Hungary. Negotiations are under way to use the patents in Mexico, and in other countries. W. H. Bongart is using this system in Tampa, Fla.; E. H. E. Shropshire & Son in Birmingham, Ala., are building a garden city; in Augusta, Ga., a large orphan asylum is being constructed. The Lackawanna railroad is erecting forty model workingmen's dwellings in Scranton.

The contract in Hungary came as a result of economic and political conditions. The city is prosperous and rents for apartments were advanced to a high figure. The cost of living became a burden and it was made a political issue to such advantage that the party pledging better conditions gained control. Experts were sent abroad to study conditions and the Morrill system met with such favor that a preliminary contract was entered into with the understanding that successful demonstration would mean the awarding of a contract for 420 cement houses. The general manager of the company, J. P. Jackson, went to Budapest with the moulds and he is now engaged in superintending the erection of the first lot of dwellings.

After constructing several houses from the Morrill plans, E. A. Cummings & Co., 40 Dearborn street, Chicago, a large real estate firm, sent the following telegram:

Milton D. Morrill,  
403 Corcoran Bldg., Washington, D. C.  
Plans received; they are fine; will build three at once. Send me four sets each of 4, 5 and 6 rooms, 1-story bungalow, same as these just sent, with all details possible; hurry them forward. Moulds working fine. Will write you fully soon and send some pictures.  
W. L. Twining, Manager.

The inventor, Mr. Morrill, has decided to make it his life work to build small houses for working people. He noticed, as an architect, that this feature of the building business was much neglected, the great drain on the resources of the country from fire impressed him as a serious economic loss which could be prevented, and the poor character of houses built to rent or sell at low prices was so striking, and the rapid deterioration in value of such structures was so marked that he felt it to be a worthy cause in which to enlist his talent and his energies. He studied the problem and evolved the model, prize-winning house. He devised a plan using sectional metal moulds, fastened by wedges, and he adopted a formula for mixing his cement in the proportion of 1, 2 and 4, and of spouting it into the moulds. Everywhere he studied simplicity and the elimination of labor.

In an address given before the National Association of Cement Users last year in New York, Mr. Morrill elaborated his ideas on constructing inexpensive homes of reinforced concrete. He suggested that there must be a "concrete style." "Already," he said, "we have worked out the structural forms which seem best suited to the material, and possibly the best concrete buildings have been designed by engineers, as they have followed the simplest and most logical shapes, and have not been hampered by architectural precedent."

There is no reason, in Mr. Morrill's opinion, why



structures cannot be designed in the most simple and natural forms for concrete, and still be beautiful in proportion, line and color. Architects are so wedded to traditional forms, he thinks, that they are likely to employ cornices, columns and arches where they serve merely decorative functions. "It has seemed to me," he says, "that in cement work we have been designing in styles suited for wood or brick, and constructing in concrete with shapes unsuited and unnatural to the material in hand; this has, of course, made work difficult and expensive."

When Mr. Morrill began to study the problem of the cheap home, economy compelled him to put all questions of architectural display or development out of his mind. He began at the beginning, with first principles. The primitive house was in his mind's eye, and he decided that structures did not need to be costly to be beautiful. He decided that good taste, proportion, and a good selection of materials and color were all that was necessary. The houses of the colonial period were beautiful, although constructed of materials often inexpensive. The key was in the good taste and simplicity of treatment.

The architect who had set about solving this problem of the small house found that it was more difficult than was apparent at the outset. Economy being of the first importance, it was also necessary not to sacrifice convenience, beauty and stability. He undertook to combine, as far as possible, the convenience of the apartment with the light, air, privacy and consequent health of the country. By eliminating passages and hallways, all of the space was left for occupation. Every room in the plans worked out has light on two sides. One chimney alone is allowed. Convenience and economy in housework is studied. The box house was found to be by far the most economic form, as it took the least wall area, beside being the most rigid and substantial. Moreover, there was no reason why it should not be attractive and beautiful.

"Everything in daily use has been standardized," said Mr. Morrill. "Books are of uniform size, bookcases are arranged in unit sections, and the same has been done with thousands of articles about us. The principle of standard forms has reduced cost and labor to a tremendous degree and improved quality. Why cannot this same principle be applied to houses and homes? If standard homes can be built to advantage at wholesale, how important it is that these should be perfect in architecture and in plan. In all our cities contractors are building rows upon rows of houses, and in the majority of cases plans are not furnished by leading architects but they are bought from the man who will make them at the cheapest price."

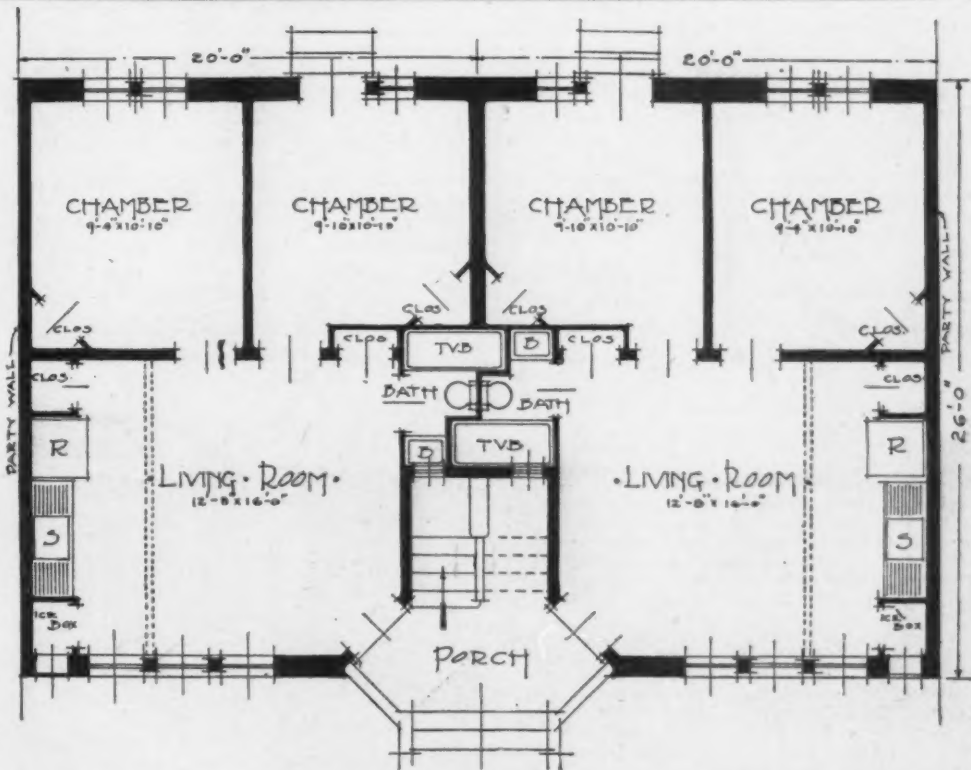
I believe that all our cities should have art commissions which would pass upon plans for fitness of appearance just as our health departments demand sanitary plans."

It was necessary to take into account the limitations of concrete work, as well as the question of expense. Simple, straight lines are ideal for this medium and after all, concludes the architect, they make the simplest and most attractive houses.

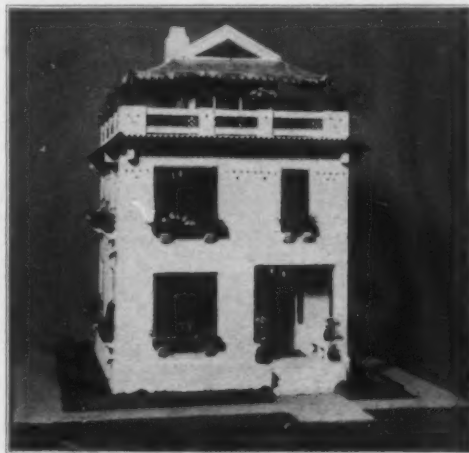
In working out his plans Mr. Morrill adopted standard unit dimensions, so that drawings are reduced to mould diagrams. After one has the design and follows the diagrams, the building is bound to come out all right. One of the plans is so arranged that the house can be built in sections, almost as a bookcase is put up, being complete in 4, 5, 6 and 7-room houses, and arranged so that any number of rooms up to twelve can be made or added with no alterations. For a group of houses the fireplaces, stairways, sinks, ice boxes, etc., are of a standard type and metal moulds are made for them. To make an attractive mantel it is only necessary to lock together the standard moulds and pour, the whole being made at a quarter of the cost for less substantial wood fixtures. A simple design for a 4-room and bath house with roof garden can be made of the cheapest possible construction and still be attractive. It can be arranged for a pitch roof, when the roof garden is not employed. In the preparation of these plans the designer has endeavored to invent homes where the inhabitant of the tenement can afford to live and where he and his family can enjoy two of the greatest gifts of God—good health and sunshine.

The first illustration shows the plan for model 2-story, 3-room apartments for the Octavia Hill Association of Philadelphia, Pa. The kitchen fixtures, sinks, ice box and closet which are to be of cement in metal moulds, occupy one end of the living room, so that by light washable curtains these can be screened when not in use. Bath rooms are interlocking in plan so that no space is lost.

The contractor's estimate in concrete was \$900 per apartment, fire-proof and sanitary. In brick, \$1,100. These can rent for \$8 to \$10 per month.



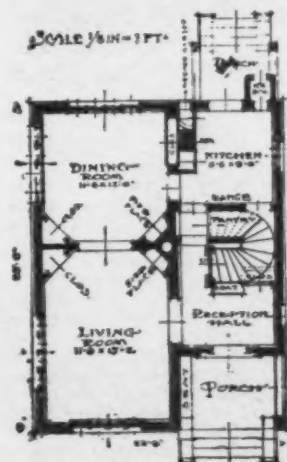
DESIGN OF MODEL CONCRETE APARTMENTS FOR OCTAVIA HILL ASSOCIATION, PHILADELPHIA, PA.



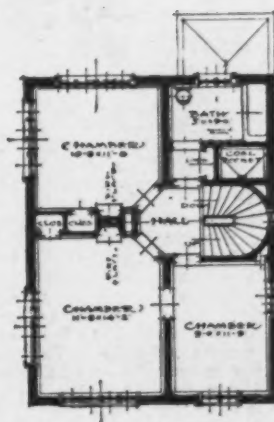
FRONT VIEW OF PRIZE HOUSE.



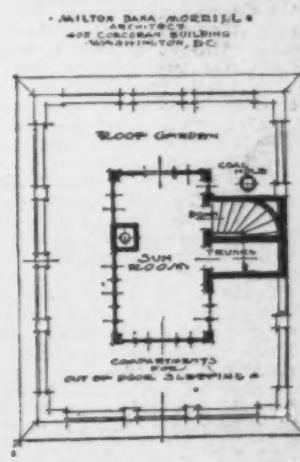
RAISING THE MOULDS ON THE MORRILL CEMENT HOUSE.



FIRST FLOOR PLAN



SECOND FLOOR PLAN



ROOF GARDEN

PLAN OF MODEL CEMENT HOUSE.

There will be ninety buildings like this in one group.

Much interest having been shown in the design winning the prize at the International Congress on Prevention of Tuberculosis, the following special features of it are given:

The coal is hoisted by a simple chain block, attached to a swinging davit and is dumped through a hole in the roof to a large pocket, from which it feeds by gravity into the firebox of stove, the ashes falling into a pit and being removed from an outside door. This is simply the application of the equipment of large plants to the homes. The stove combines in one compact fixture, cooking range, house and hot water heater, and gas stove. The garbage is placed in a cast iron chamber in the smoke flue, and after being dried it is dumped into the firebox by a damper. Fireplaces in every room have flues about the smokestack, forming natural ventilation. The icebox, which is filled from the outside, is arranged for use as a fresh air closet, doing away with the use of ice except in hot weather. The icebox can be flushed out with a hose. The roof is of open cellular construction, cool in summer. An attractive feature of the house is the roof garden and sun room, forming an out-of-door bedroom, divided by the use of movable screens. Window boxes provide an inexpensive and at the same time artistic decoration.

The Morrill plan provides for walls 6 inches thick. A cubic yard goes far on this plan, and costs \$5 per yard, so that a wall 9x12 feet will cost but \$10.

A house was built at Brentwood, near Washington, by Mr. Morrill, to demonstrate his ideas. It contained little wood except the window sash and doors. The walls were 8 inches thick, and the floors were made of 4½-inch reinforced slabs. The moulds were of wood in standard sections. One carload of Portland cement was used. To thoroughly clean a room a hose is used, the cement floors being graded to plugged tile spouts discharging on the lawn. An enclosure for the garbage pail is left under the washtub, which has an outside screen door for ventilation and removal. This is arranged to be flushed out. A small wood strip is laid in the border so that rugs and carpets can be tacked in place, if desired. All corners are covered, and all fixtures are bracketed from the wall, which leaves no places for the shelter of dust, vermin or insects, and facilitates cleaning. Insurance and repairs are almost eliminated. The houses are almost indestructible. The waste from the kitchen range heats the house through the circulation of hot water, being so built that in summer an inside firebox cuts off the house-heating system.

All fixtures, such as kitchen sinks and washtubs, lavatory and bath tubs, are cast in concrete, and given a very smooth cement finish. For the water supply a concrete tank is built in the top of the bath room which is filled from a small force pump at the kitchen sink. In some plans the roof is graded to a sand box filter connecting with the tank, so that rain water may also be stored and used.

The windows are of a casement type swinging out, with no trim but with a stencil border, sash being hinged to simple metal strips, which form a weather-tight joint. In some buildings the plans contemplate a window sliding sideways into a wall pocket, the screen being locked to the sash so that when the latter is opened the screen follows, closing the opening.

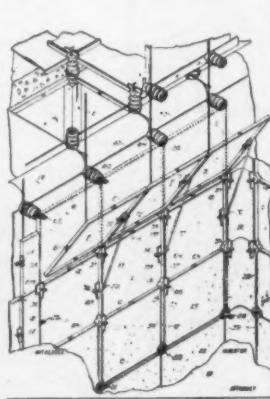
The building has no exterior ornamentation, as the flowers and vines in the window boxes and the lattice will give the best of decoration and color. Why do we have flowers and ornaments of stone when we can have real flowers which are more beautiful and decorative? These flower boxes of course they are of concrete, now contain small cedar trees which were gathered near the site, and the vines are the wild honeysuckle, which grows in fragrant tangles all about.

It is difficult to base an estimate of cost on construction of this first house, since the moulds and the superintendent's time has been charged against it, but it is safe to estimate that these houses can be built in groups at between \$200 and \$300 per room.

In the construction of concrete houses, it is found that in some light work the cost of lumber and carpentry labor for moulds is three-quarters of the total cost. It became necessary to devise a type of mould and this was done after many months of experimental work. The mould plates are pressed from 12-gauge sheet steel into flanged sections 24 inches square. Upon the completion of the footing the plates are locked to the cement spacing-blocks, furnishing a trough, into which the concrete is poured. The cement spacing blocks are of course left in the wall and the plates are locked to these by a key, which is afterwards removed. Wherever four corners join a cuff engages, wedges

the plates together and draws them to a perfect alignment on the inside. The whole stands very rigid and firm when erected, and in experimental work it has not been found difficult to keep the work plumb, as the corners give alignment. The plates are two tiers in height, each tier being clamped together in series, and attached by a hinged rod so that the lower tier is unlocked and swung to its new position on top and locked, there being few loose parts to fall.

These plates are locked together in the same

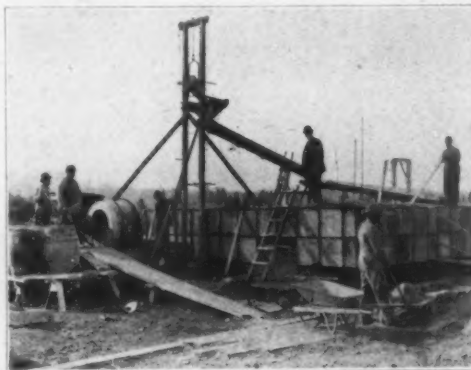


SECTIONAL VIEW OF MOLDS.

way for the floors, the spacing blocks here give the exact thickness of slab, and reinforcement rods are placed and accurately secured to these blocks by bending a heavy wire which is cast in each block with end protruding for this purpose. To give a smooth and even floor surface, a wet mix is poured in, and the plates are slid in place on top and locked to spacing blocks, and wedged down until the surplus mix is squeezed out in front, this should do away largely with expensive labor in cement finishing. For the floors cement spacing blocks are cast with projecting flanges so that they will give considerable support to the slab and reinforcement and permit the lower plates to be removed after three days. A post being wedged and blocked up under each spacer gives supports only 24 inches apart.

In describing some of the minor problems encountered, Mr. Morrill says:

"I found upon experiment that a slight ridge or pattern was formed by the joining of the mould plates and spacing blocks were found to be of



POURING A MORRILL CEMENT HOUSE.

slightly different color. I have treated this as wall decoration, and with the rosettes cast on the spacing blocks, an extremely interesting pattern is formed, and it is possible to leave the wall without further finish inside or out, unless a brush coating is applied to give a more uniform color, and as a safeguard against dampness. As the plates are cleaned and greased each time they are raised, and as the concrete is a very wet mix, an extremely smooth surface is obtainable, requiring no plaster, the economy is, I believe, apparent."

The first cement house at Virginia Highlands was the railway station. Here the fountain, seats, flower boxes, signs, and much of the garden furniture has been constructed of cement. The station was poured into the moulds above described, the concrete consisting of cement, sand and cinders. The walls, roof and partitions are of concrete. The cinders were used in order to show the factory owners the possibility of constructing with the refuse from their own furnaces, healthy and inexpensive homes for their employees.

#### CONCRETE AT OKLAHOMA FAIR.

Oklahoma City, Okla., Sept. 18.—No fair in the United States can boast of a bigger cement show this fall than the Oklahoma State Fair, which opens Tuesday, September 26, and closes October 7. While any number of state fairs have given more or less consideration to the cement industry and allied interests, none has carried out the idea on such an elaborate scale as the Oklahoma State Fair. Not only has the Oklahoma State Fair classified the cement and associate exhibits, but the association has erected a handsome building exclusively for the annual cement show. It is an attractive building, containing 7,500 square feet of floor space, and will be filled to the four walls with concrete mixers, cement posts, block machines, burial vaults, stock tanks, well tile, cement brick machines, finishing tools and appliances, waterproofing, coloring, etc., when the gates of the big exposition swing wide open on Sept. 26. In fact, every modern cement product and all improved machinery and appliances for producing them will be on display, as indicated by the long list of firms which have already engaged space. Prominent among the exhibitors might be mentioned: Waterloo Cement Machinery Corporation, Iowa; Dewey Portland Cement Company, Oklahoma City; Great Western Portland Cement Company, Kansas City; Oklahoma Portland Cement Company, Oklahoma City; Illinois Concrete Machinery Company, Oklahoma City; A. M. DeBolt, Oklahoma City; Western States Portland Cement Company, Kansas City; United States Gypsum Company, Kansas City; Iowa Portland Cement Company, Kansas City; Monarch Plaster Company, Watonga, Okla.; W. H. Hoffman, Oklahoma City; Luck Cement Post Mold Company, Aurora, Ill.; Monarch Portland Cement Company, Humboldt, Kan.; Oklahoma Quarries and Construction Company; National Builders' Supply Company; United Kansas Cement Company; V. O. Hyde, Oklahoma City, and others to come from the Iowa State Fair when it closes and a number from the fair at Hutchinson, Kansas.

#### CONCRETE IN ILLINOIS.

Springfield, Ill., Sept. 18.—The Fred A. Little Company, of Fond du Lac, Wis., was given the contract for the new reinforced concrete plant of the Rockford Machine Tool Company at Rockford.

John Devoix of Kankakee is building a concrete bridge near Monee, according to plans made by the State Highway Commission.

Hall & Hatley, of Nokomis, have the contract to replace twelve wooden bridges near Nokomis with concrete structures.

The McDowell Engineering Company is building a concrete grain elevator 90 feet high by 38 feet square at Nashville for the Huegely Milling Company.

Beckstrom & Bergeson, of Rockford, with their bid of \$8,426.00, won the Keith Creek bridge contract at Rockford.

Silas Hopkins, of the Hopkins Manufacturing Company of Joliet, recently appeared before the city council of Plainfield and told of the plans to move the cement products factory from Joliet to Plainfield.

Fred Hillquist, of Geneva, furnished 1,500 concrete blocks for the Geneva State School for Girls.

Six reinforced concrete bridges will be built near LeRoy by Behrends & Son, of Bloomington.

The Augusta Cement Company, of Augusta, will build the new town hall in LaMoine township, near Augusta.

W. H. Adams, of Eminence, has embarked in the concrete block manufacturing business.

The Carson Cement Tile Company has purchased property in Ramsey and will remove its plant from Carson township to Ramsey.

#### Y. M. C. A. BUILDING OF CONCRETE.

The city of San Diego, which is to have a Panama Exposition in 1915, has just made provision for a Young Men's Christian Association building to cost with the lot, \$200,000. The building will be of reinforced concrete construction and fireproof throughout. When completed there will be few finer Y. M. C. A. buildings in this country. The building and equipment will cost about \$150,000.

Nine of the leading architects of San Diego competed for the honor of furnishing the plans. Those of G. W. Kelham were accepted. The decision of the committee was unanimous. R. H. Shields & Son will erect the building by day's work, purchasing all materials, engaging all employees and superintending the construction. The building will be 50'x150' in size with a gymnasium 50'x100'. It is expected that a membership of 1,500 men and boys can be accommodated. There will be a regulation swimming pool 20'x60' in size, social rooms, boys' department headquarters, night school accommodations, auditorium, and sixty fine dormitories for young men living away from home.



# TIMBER

## Versus Concrete and Steel for Wall and Roof Supports in Mines—The Concrete Steel Combination Economical.

This article and the illustrations accompanying it are from the July Issue of American Forestry, Washington, D. C.

The modern up-to-date mine is more and more, where possible, using concrete and steel in place of timbers. If this can be generally done the amount of timber which will be saved, according to statistics obtainable in the anthracite regions in Pennsylvania, will be approximately that covering a hundred and fifty thousand acres. It is an axiom that the price of mine timbers is rapidly increasing and the supply as rapidly decreasing. It has been estimated that the cost of timber per ton of coal mined is eight cents. The saving in mine timbers by the use of concrete and steel is readily conceded.

The accompanying diagram (Fig. 1) shows the various factors which make the timbering of a mine so costly. Decay is the greatest of these; it cannot be prevented; it can only be minimized. Foresters believe it can to a certain extent be overcome by "peeling," by seasoning, and by treating with oils and chemical salts;—but it is produced by bacteria and fungi, which perhaps are in the timber when cut or passed on from other decaying timber in the mine, and which grow through checks, cracks and nail wounds. All this can, to a certain degree, be overcome by preventive measures; but the greatest element in the decay of mine timbers is the condition which prevails in the mine itself,—the lack of ventilation and, above all, the alternating states of dampness and dryness. In the great mine disasters which we constantly read of, the cause is frequently given as decaying timbers which rot and fall, burying miners and creating a condition in the mine itself which takes much labor and money to overcome. With concrete and steel "timbering" of course no element of decay enters in.

From an inspection of the diagram it will be seen that breakage, or "crush" or "squeeze," due to a sudden fall of coal and of rock, is the next largest factor. Many times the mine timbers are broken only after they have been weakened by decay. Sometimes new timbers are crushed. Concrete and steel would be the better withstand the shock of this sudden deluge. Under breakage, also, wear must be considered. The cross ties in the main haulage ways, the wooden rollers, the drum lappings, are worn by constant contact with the ropes and cables, and concrete construction would obviate many of these difficulties.

Insects also are a factor in the waste of mine timbers. They are usually brought into the mines in infested timber, and passed along indefinitely to sound wood. The waste through decay or fracture of timbers, though many times confined to but one part of the set, often renders the whole set useless. The sizes of timbers are sometimes too large, sometimes too small to support the weight, sometimes badly and carelessly set. And this inefficiency affects life and property.

In the accompanying illustration (Fig. 2), which shows a mine timbered in the old way, it can be seen at a glance how wasteful is the giving way of one of the timbers and rendering all the rest useless. Also from the illustrations (Plates I, II, III and IV) of the concrete and steel construction, it will be seen how much more efficient it is, for it obstructs the mine less and gives much better support to the roof. Because of the amount of

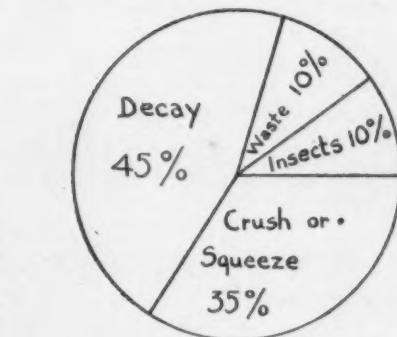


FIGURE 1.



FIGURE 2.

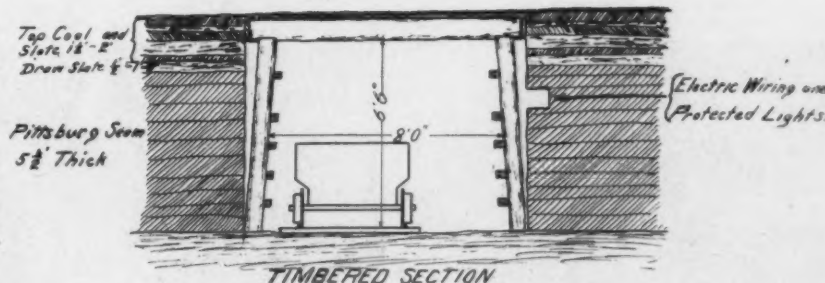


FIGURE 3.

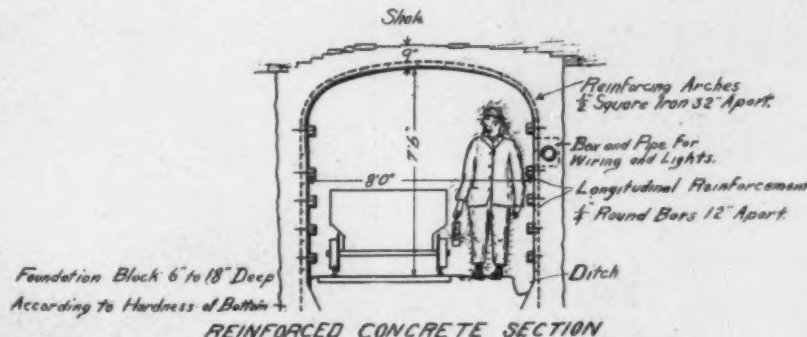


FIGURE 4.

timber used in the mines it has become necessary for mining companies to be also timber companies. They found that they could the better inspect their timber when it was their own, and by cutting down profits in timber effect a great saving. But even now timber is often accepted at the mine in such

a condition that it is doubtful whether its service in the mine would pay for the cost of setting it, exclusive of the cost of the timber. A grave indictment is the loss of life occasioned by bad setting, the criminal haste when the contract for setting timbers in the mines is given to the company which is concerned only with placing the greatest amount of timber in the shortest possible time, regardless of where or how placed. Perhaps the ordinary mine owner is more concerned with the loss of property than with the loss of his men, and often when mine timbers have been so placed that they cannot properly resist the strain, the whole outlay has been either a partial or a total loss.

It has been argued against concrete and steel construction that it would not be in line with regular practice of preparing a mine, for, according to the old way, timber was hauled into the mine, cut on the spot, and fitted in. With concrete and steel construction measurements must be taken, and the mine must in a sense be made to fit the supports. But there is no doubt, and it has never been argued, but that the modern construction is better able to stand the strain, that it is safer to life and property, and, although the initial outlay for concrete and steel is great, yet in the end a saving is effected. No figures are yet obtainable as to the comparative cost.

Much has been done by trained foresters to try to prolong the life of mine timbers. They have made studies of the subject, and their conclusions have had weight with mine owners. In 1906 the Forest Service, in co-operation with the Philadelphia & Reading Coal and Iron Company, planned and carried on a series of experiments to determine the best methods of prolonging the life of mine timber. The results of that study are contained in a bulletin—F. S. Circular 111, issued October 10, 1907—called "Prolonging the Life of Mine Timber," by John M. Nelson, Jr. It is from Mr. Nelson's circular that the diagram (Fig. 1) and the photograph (Fig. 2) have been taken.

Experiments with concrete and steel construction have been carried on for a number of years. The mine which is best fitted out with these modern appliances is the Allport Mine at Barnesboro, Pa. It is to be noted that in connection with the new government Bureau of Mines a government mine is to be opened at Bruce-town, Pa., in the near future. It is the object of Dr. Holmes, Director of the Bureau of Mines, to make this mine, run by the government, typical of actual mining conditions. Accordingly, parts of the mine are to be timbered in the old way (see Fig. 3), and parts are to have all modern appliances. It is proposed in connection with the government mine to change the testing chamber where the explosives are tried out and where experiments in the explosibility of coal dust are made from Pittsburgh to the new government mine at Bruce-town. By having this chamber in connection with the mine it is thought that experiments can be made first in the chamber and then in the mine itself. In this connection, it is noteworthy that the part of the mine in which explosions are set off is to be entirely constructed of concrete and steel. (See Fig. 4) And the government expects to be able to entirely control explosions within this area.

A new era for the mine is approaching—an era without the old waste, the old lack of efficiency. Explosion and fire, with its attendant loss to life and property, will in the future be done away with. The cost to "timber" per ton of coal will be made smaller, and the annual timber consumption will be materially decreased, besides the increase in efficiency.



PLATE I—STEEL ROOF SUPPORTS RESTING ON TIMBERS IN BARTON MINE, THE MIDDLE STAGE, HALF TIMBER, HALF STEEL.



PLATE III—STEEL GANGWAY SUPPORTS IN ENTRANCE TO ALLPORT MINE. ALL STEEL AND CONCRETE.



PLATE IV—ENTRANCE TO ALLPORT MINE. ALL CONCRETE. NO TIMBERS TO CATCH FIRE AND SPREAD THROUGHOUT THE MINE.

PLATE II—STEEL GANGWAY SUPPORTS IN EUREKA MINE, THE VERY LATEST, ALL STEEL.



## CHIMNEY

**Built at Plant of C. K. Williams & Co., Easton, Pa., is Third Highest in the World.**

The second tallest chimney in the western hemisphere, the third tallest in the world, has just been completed at Easton, Pa. It has a height of 375 feet above the top of its foundation and an internal diameter at the top of but 7 feet.

This structure was built at the dry color plant of C. K. Williams & Co., the largest factory of its kind in this country. Situated in a narrow valley, it is bounded on two sides by rather abrupt hills rising to a height of approximately 200 feet. Some of the colors produced in the plant are made by roasting ores of various kinds in kilns, at present operated under forced draft to drive off the sulphur and other impurities. Other colors are made by chemical processes and in kilns of various construction.

During the process of manufacture a damp acid gas is given off. The new chimney, which takes the place of a small common brick one, practically disintegrated by the action of the acid gases, is calculated to take all the gases from the kilns as well as the boiler gases, and produce a draft sharp enough to eliminate the present expense of fans and also to discharge the objectionable gases to a height that will put them away from habitation, or so dilute them in the atmosphere that they become unnoticeable.

It was first considered to erect a chimney 200 feet or 250 feet high, on top of one of the adjoining hills, connecting it with the plant by means of a flue some 1,200 feet long. Calculations were made along these lines, but the cost of the flue and the shorter stack, plus the maintenance of such a long line of masonry, was determined to be more than a chimney either 375 feet or 400 feet high, rising above the hills, erected alongside the plant in the valley with a comparatively short length of flue to the roasting kilns.

The height of the chimney was approximately controlled by the surrounding hills and the fact that the gases must be discharged at a great height and above the highest point in the vicinity of the plant. The problem that confronted the engineers was the proper economical diameter and the construction to employ to make the chimney acid proof in all its parts and appurtenances.

In the determination of the proper size of chimney, it was necessary to know the chemical analyses of the acid gases as well as their specific gravities and their temperature. The specific gravity was found to be 13.7, and their composition sulphur di- and tri-oxide, water vapor, an oxide of carbon, with oxygen and a high percent of nitrogen. The duty being performed by the fans on the kilns was determined and reduced to an equivalent boiler horse-power. To this was added the horse power of the steam boilers now under operation, plus those designed for an extension of the plant.

Of the elements and combinations making up the composition of the acid gases given off, neglecting the sulphur, di- and tri-oxides, whose percentages were small, there were but two heavier than air. The greatest volume, water vapor and nitrogen, were both lighter than air. Reducing these specific gravities of the several elements in the acid gases to a basis of specific gravity of air, it was determined that the average weight of the acid gases per unit of volume was slightly less than the ordinary gases and fumes developed under steam boilers with a fair grade of coal. In fact, the gases were found to be lighter by the factor of 0.015 before coming in contact with the atmosphere and at a stack temperature of 350 degrees Fahrenheit.

With this determination it was safe to reduce the volume of gases to an equivalent boiler horse power and determine the theoretical diameter by the usual methods. This proved to be 6 feet 10 inches, with a generous allowance of 4 inches for effective area, the chimney was designed 375 feet high and 7 feet 0 inches inside diameter at the top.

The foundation, 50 feet square and 12 feet deep, of concrete mixed in proportion of one cement, three sand and five graded concrete stone, rests on a bed of comparatively hard shale rock. The pressure under a wind load of 50 pounds per square foot, at the foot of the foundation, is about three tons per square foot.

The chimney is built in nineteen sections; no section length greater than 20 feet. The outside diameter at the bottom is 37 feet  $\frac{3}{4}$  inch, with a wall thickness of 31 $\frac{1}{2}$  inches. The wall for the last 20 inches at the top is 7 $\frac{1}{4}$  inches thick. The

whole structure is built of acid proof perforated radial brick, manufactured at Sayreville, N. J., and cut on radial lines to fit the varying diameters. The radial blocks had to meet a specification of a minimum crushing strength of 4,000 pounds per square inch, not deducting the vertical perforations. They are entirely acid proof and specified to resist a temperature of not less than 2000 degrees Fahrenheit. The column is cylindrical from top to bottom, with a constant batter of 75 per cent. A wind pressure of 50 pounds per square foot on a flat surface, or 25 pounds per square foot on the projected area of the round shaft, was assumed in the design, and at no point in the structure is there any tension under the combined forces of weight and wind.

The maximum pressure at any point is a fraction less than 19 tons per square foot. The calculations for tension at any horizontal joint are calculated without taking into account the weight of the lining. In other words, there is no tension in the structure with the lining out, which lining is supported on corbels built out from the main walls of the chimney. The maximum pressure is not over 19 tons per square foot with the lining in. These specifications necessitated an unusually sharp taper, which gave the finished structure not only a bold but a very striking outline. The extremely narrow diameter at the top and heavy taper is unusual and unique.

In order to resist the action of the dilute wet acids, the chimney is lined throughout with 4

ing of 4 $\frac{1}{4}$ -inch solid copper rods, surmounted with platinum tips. These extend 4 feet above the top. There is one down-leading conductor of a  $\frac{1}{2}$ -inch solid copper rod, not stranded, supported by anchors every 6 feet. All rod fasteners within 75 feet of the top are made of lead, and all portions of the lightning rod for that distance are covered with an armor of lead, except the extreme platinum points. The outside ladder to within 75 feet of the top is galvanized, and for the remainder of the way the ladder is also covered with an armor of lead.

Two flue openings are provided at the top of the foundation, 10 feet high and 6 feet wide, reinforced by a system of I-beams and structural iron, all iron covered with an acid-proof protection. For the present but one flue will be utilized, the other being temporarily bricked up with an 8-inch curtain wall.

Perforated radial brick were used throughout the construction of the chimney, which was designed and built by the Alphons Custodis Chimney Construction Company, of New York. Record time was made in the erection, the main walls, 375 feet high, having been built in 55 days; the 375 feet of lining in 18 days. The dead weight of the walls and lining, above the foundation, is 3,305 tons.

The Building Code Commission, of Milwaukee, Wis., has completed its work of formulating an ordinance governing the manufacture of concrete blocks and it will be introduced at the next meeting of the council.

The Idealite Company has been incorporated at South Bend, Ind., with a capital stock of \$100,000, to manufacture and sell artificial stone, tile and other building material. The incorporators were George B. Pulfer, M. Weltstein and G. B. Hopkins.

## Side Talk

*in which the Advertiser tells his own story*

### A NEW FEATURE OF THE GANDY BELT.

The Gandy Belting Company, of Baltimore, sole manufacturer of the Gandy Belt in the United States, has adopted a novel as well as an entirely original idea for distinguishing the Gandy Belt from the other stitched cotton duck belts. Commencing September 1, 1911, one edge of the Gandy Belt will be painted green, while the rest of the belt will remain red as before, and it will continue to bear the brand "The Gandy Belt" and their trade mark, a coil of belt and a bale of cotton laid across it, printed upon the belt at intervals throughout the entire length of the roll, the same as has been their rule heretofore.

The Gandy Belting Company explain that this step is made necessary because owing to the uniform high quality of the Gandy Belt some unscrupulous competitors have endeavored to imitate it in appearance, color and texture. As there are many features about the Gandy Belt that cannot be imitated, and as the imitation belts are usually of an inferior quality of material and workmanship, these imitation belts have failed to give the same degree of satisfaction as is experienced by the Gandy Belt users.

It came to the notice of the Gandy Belting Company that some unscrupulous dealers were palming off on their customers these inferior belts made in imitation of the Gandy Belt, in this manner defrauding the customers of the Gandy Belting Company by putting upon them belting that they had not ordered and did not want, and at the same time defrauding the Gandy Belting Company of sales. To put a stop to this, the Gandy Belting Company found it necessary to institute legal proceedings to check the fraud and at the same time to educate their customers to know their goods. These suits were instituted in the United States Circuit Courts in Chicago, Pittsburgh and Cincinnati, and in all of these cases the Gandy Belting Company obtained decrees sustaining their rights and enjoining the defendants from selling or offering for sale any belt not made by them as and for the Gandy Belt.

The foundation of the Gandy Belt is a very heavy cotton duck woven in the duck mills of the Gandy Company. The sewing machines on which the belts are stitched are built in their own machine shop, and have features possessed by no other sewing machine, in that they stitch with an imbedded stitch, making the surface of the belt smooth and holding the plies solidly together.

The belt is then treated by a secret process, which renders it water, heat and steam proof.



THIRD LARGEST CHIMNEY IN THE WORLD, AT PLANT OF C. K. WILLIAMS & CO., EASTON, PA.

inches of solid radial acid-proof brick, separated from the main walls by an air space of 2 inches. These brick are laid in an especially prepared acid-proof mortar, supported on corbels built of heavy lipped shape solid block. The top brick of each section of lining being made wedge shaped and fitted up under the lip of the corbel block above, thus forming a drip or drain and preventing the acid dust from getting back of the lining. The corbels and four courses below the corbels on the inside of the main walls are laid in acid-proof mortar. The upper 75 feet of the outside of the chimney is also laid in acid-proof mortar. The rest of the main walls are laid in cement lime mortar. The top of the foundation, inside of the chimney, is protected by 4 inches of acid-proof paving laid in acid-proof mortar. A drain of vitrified pipe is also provided inside the chimney leading through the foundation to carry off any water or acid that may collect at the bottom.

The top of the chimney is protected with a lead cap weighing 10 pounds per square foot. This cap covers the entire head, extending 2 feet down the outside and 5 feet down the inside, overlapping the top of the last section of the lining. Joints are burned down.

The chimney has a lightning protection, consist-

The Gandy belting is thoroughly stretched and seasoned before leaving the factory. It is uniform in width, runs straight and true, and will not slip or harden.

All orders are filled the day received, as they always carry in stock at Baltimore more than 1,200 rolls of roll belting in all widths from 1" 4-ply to 30" 10-ply. In addition to this they carry in stock more than 4,000 Gandy Thresher Belts in every recognized thresher length and width.

In comparison with leather belting and rubber belting the Gandy Belt costs much less than either, as it is only about one-third the cost of leather belting and 25 per cent less than that of rubber belting. The Gandy undoubtedly has many strong points in its favor, and its makers claim for it that it is the most durable and economical belting on the market.

The Milwaukee Concrete Mixer and Machinery Company, Milwaukee, Wis., reports a good demand for their machines.

Mr. Koehring, of the Koehring Machine Company, Milwaukee, Wis., says his company has enjoyed a prosperous year. This is not to be wondered at considering the popularity of the house.

The Westinghouse Electric & Manufacturing Company, of East Pittsburgh, Pa., has recently published several new folders on their different meters, switchboards and generators.

The Bureau of Explosives, 30 Vesey street, New York City, has issued a very interesting pamphlet known as B. E. Pamphlet No. 7, entitled "General Information Respecting Explosives and Other Dangerous Articles."

The preparation and printing of this pamphlet was suggested to the chief inspector of the Bureau of Explosives by the numerous inquiries by steamship and railway officials and employees for non-technical information on the general nature and transportation risks of substances whose names have appeared from time to time in the lists of dangerous articles issued by the transportation companies.

Supplies may be secured at the following prices: Single copies by mail, 25c; not more than 100, 10c per copy, f. o. b. New York; 101 to 500, 8c per copy, f. o. b. New York; over 500, 5c per copy, f. o. b. New York.

A short time ago the Clinton Metallic Paint Company, Clinton, N. Y., sent out a blotter to the trade which reads:

"THEN—After you have read and heard all the claims as to the quality of other mortar colors, just make a comparative test of any of them with the goods bearing this 'Little Yellow Side-Label.'"

They have just sent another blotter which asks some very pertinent questions that go right to the point. This blotter reads:

"NOW—Isn't it strange that 'Clinton' colors are the only ones imitated?"

"Doesn't that prove to you that 'Clinton' colors are the best?"

"Wouldn't the imitators try to sell some other brand if they thought it was as good as 'Clinton'?"

"With our trademark registered, do you think we would allow this thing to go on if these imitators had an article that could compare with ours and hurt our trade?"

"Gosh! What more do you want?"

A new catalogue published by the Ceresit Waterproofing Company, Commercial National Bank Building, Chicago, gives some valuable information relative to "Ceresit" waterproofing manufactured by this company. The catalogue is larger than the old one and contains many photographs showing where "Ceresit" has been used.

#### SPECIAL SHOVEL FOR STRIPPING.

The Marion Steam Shovel Company, of Marion, Ohio, has recently perfected a new type of revolving steam shovel which successfully meets the demand for a machine that will satisfactorily handle the stripping of heavy over-burden of any nature.

These shovels are exceedingly powerful, carefully designed to withstand the severe shocks and strains incident to the strenuous conditions under which they must operate. They are equipped with extra long booms for stripping wide cuts and dumping the excavated material at a sufficient height and distance to permit the mining of the uncovered material without a part of this being under the soil bank.

By a single operation these shovels take the over-burden from the bank on one side and deposit it far enough over on the other to eliminate the extra expense of rehandling so often necessary. Only one crew, that of the shovel, is required for the complete operation.

Here follows the general specifications of model 250 with 65-foot boom:

Approximate shipping weight.....	125 tons
Approximate working weight.....	146 tons
Standard size dipper.....	3½ cu. yds.
Length of boom.....	65 ft.
Radius of boom from pivotal center.....	66 ft.
Height of dump above rail.....	45 ft.
Radius of cut at bottom of pit.....	55 ft.
Radius of cut at 30 ft. elevation.....	74 ft.
Height of cab from rail.....	20 ft.
Radius of cab from pivotal center.....	31 ft. 6 in.
Hoisting engines (double).....	12 in. x 14 in.
Rotating engines (double).....	9 in. x 9 in.
Crowding engines (double).....	8 in. x 8 in.
Boiler designed for.....	150 lbs.

The shovel revolves in either direction at the will of the operator. The hoisting engines are of the double horizontal type, equipped with link reverse. These engines are built for continuous heavy duty and are controlled by a patented throttle of the balanced-piston type, with lowered control.

The rotating engines are double, reversed and controlled by a central valve of the balanced-piston type.

The boom is of the all-steel type, of the most modern design, well trussed and braced.

The boiler is of the locomotive type, set fore and aft on the center line of the shovel, and fired from the rear end.

The above company manufactures every part entering into the construction of the machines. They operate their own basic open-hearth and manganese steel plants, and to insure a uniform and reliable product, they have a thoroughly equipped chemical and physical laboratory in charge of competent chemists who test all materials employed. Every part is rigidly inspected both before and after assembling. All machinery is manufactured to gauges and jigs on the interchangeable system, thus giving accuracy of production and insuring all repair parts fitting perfectly.

A descriptive pamphlet of this new shovel can be had by addressing the Marion Steam Shovel Company, Marion, Ohio.



E. E. BUHLER, CHIEF OF QUEENS FIRE DEPARTMENT AND MEMBER OF THE FIRM OF EDWARD E. BUHLER & COMPANY.

A complete plant for drying and grinding felspar has been designed by the Ruggles-Coles Engineering Company for the Bedford Felspar Company, Bedford, N. Y. The capacity of this plant will be fifty tons 180-mesh felspar per day.

#### CONCRETE CURB PROTECTING DEVICE.

Edward E. Buhler & Co. have added to their many popular products a number of concrete curb protecting devices which are bound to become more and more widely used, because of their great efficiency and durability.

Hundreds of contractors in cement street and road work, as well as concrete pavement makers, are now using these wonderful metal reinforcing agents, with very satisfactory and economical results.

The contractor who considers not only the appearance of his work but its wearing qualities as well, will find these productions of unusual value to him, for their use insures the maximum of durability. Pavements and curbs thus reinforced are practically indestructible and always retain their original strength and perfect form.

The Imperial Hook Curb Bar, at present being manufactured and sold by this company, makes a curb that lasts four times as long as ordinary curbing. It not only reinforces the curb, but keeps the entire curb line in perfect alignment and protects the corner. Shear hooks are punched from the center web, forming the strongest possible bond in the concrete. While the use of this steel bar adds very little to the cost of the work, the actual value of the curb is quadrupled by its use. Straight lengths and curved corner sections have the same reinforcing qualities.

For expansion joints in pavements running across streets a Hook Shear Bar is manufactured, this perfectly preventing the wear of horses' shoes and metal tires common to ordinary concrete pavement.

For protecting the longitudinal expansion joint of concrete pavements a Hook Angle quickly demonstrates its worth.

Shear members are punched from both sides of the angle and where such an edge protector is embedded in a concrete slab nothing can dislodge it.

Other devices of equal value and interest are shown by this progressive firm, whose offices at 103 Park avenue, New York, are always busy. Edward E. Buhler, the head of the firm and its moving spirit, is one of the "live wires" of the building material trade. In his office he handles an immense amount of work—every detail of which he is familiar with. As one of the fire chiefs of Greater New York, Mr. Buhler has won enviable distinction and widespread popularity.

The Kennedy Manufacturing & Engineering Company, 120 Liberty street, New York City, has issued a pamphlet describing their ore-milling, cyaniding and smelting machinery. All the various kinds of crushing, mining and smelting machinery manufactured by the company are described and illustrated in the booklet. In addition to this machinery the company manufactures a complete line of cement machinery. Among the machines described and illustrated in the handsome booklet are: The Kennedy Gyratory Crusher, side discharge, left hand, with drawing showing the different working parts; a solid cast steel frame Blake crusher; rack and pinion ore bin gates; draught bin gates; standard screens; different makes of mortars; hydraulic classifier; stamp battery cams; trolleys, etc.

Many other machines and appliances are illustrated in the pamphlet, section B, first edition. It can be had free of charge from the above company.



MODEL 250 SPECIAL REVOLVING STEAM SHOVEL STRIPPING OVER BURDEN FROM COAL IN MINES OF THE HARTSHORN-PATTERSON COAL CO., AT MISSIONFIELD, ILL.



**TWO LATE BOOKS.**

*Bungalows, Camps and Mountain Houses, Selected and Compiled by the Editor of the "Architects' and Builders' Magazine."*

This book consists of a large variety of designs by a number of prominent architects. It shows buildings that have been erected in all parts of the country. Many of these are intended for summer use only, while other examples are of structures erected in California and in the southern states for permanent residences. It also contains illustrations of camps, hunters' lodges, log cabins, etc., suggestive for vacation use in woods and mountains.

In most instances, floor plans are given, also material used and cost of construction. It contains a list of the contributors and with few exceptions, the name of the architect appears with each design.

The book is beautiful typographically. Fine enamel paper is used throughout. Ninety elaborate plates, clear cut and well executed, are presented. This book will be a great help to the builder, as it gives him lines along which to build; to the architect as the plans, although full and complete, are exceedingly suggestive and can be added to or certain parts changed or eliminated entirely.

The material used in construction can be altered to meet the necessities of the case or the requirements of the owner. Undoubtedly this book will be appreciated by many.

*Building Construction and Superintendence by F. E. Kidder, C. E., Ph.D., Architect; Revised and Enlarged by Thomas Nolan, M. S., A. M., Etc.*

This work is comprehensive and complete. The author's primary object has been to present to the student, architect and builder a text book and guide to the materials used in architectural masonry and the most approved methods of doing the various kinds of work, and incidentally to point out some of the ways in which such work should not be done and the too frequent methods of slighting the work.

To make the book convenient for practical use and ready reference, the various subjects have been paragraphed and numbered in bold face type and many cross references are made throughout

the book. The table of contents shows the general scope of the work, the running title assisting in finding the various parts and a very full index makes everything in the book easy of access.

A glance given at this table of contents lets one know at once the matter treated, every subject being covered thoroughly and completely, clearly expressed and free from all ambiguity. Technical words are avoided wherever possible. Each chapter has many subheads, so that one can readily find even the minute, particular subject under investigation. We give here only the main heads, in order that some idea of the matter treated can be conceived: Foundations on Firm Soils—Foundations on Compressible Soils—Masonry Footings and Foundation Walls—Shoring and Underpinning—Limes, Cements and Mortars—Building Stories—Cut Stonework—Bricks and Brickwork—Architectural Terra Cotta—Fire-proofing of Buildings—Concrete and Reinforced Concrete Construction—Iron and Steel Supports for Masonwork—Skeleton Construction—Lathing and Plastering—Specifications—Appendix.

The architect and builder will appreciate this work highly. It will unquestionably be of great assistance to them and we pride ourselves on adding this book to our list.

These books can be secured by writing to ROCK PRODUCTS, 537 South Dearborn street, Chicago.

**THE ATLAS CRUDE-OIL ENGINE.**

The Atlas Engine Works, of Indianapolis, Ind., has recently issued a handsome illustrated booklet describing the new Atlas crude-oil engines, of the Diesel type. These engines are built in two, three and four cylinder vertical units, respectively 300, 450 and 600 B. H. P.

This engine is a four cycle engine into which you simply feed air, compress it to 500 pounds per square inch, resulting in a temperature of approximately 1,000 degrees Fahrenheit; a fuel pump spraying small quantities of crude oil into the air chamber; a complete burning of the fuel through the heat generated by the high compression of the air—that is the whole story of the principle of the Atlas oil engines of the Diesel type.

This booklet can be had from the above company if you will mention ROCK PRODUCTS. It contains much valuable information to any one who uses power.

T. L. Smith of the Chicago Concrete Machinery Company is filled with enthusiasm these days over the pronounced success of the new hot mixer and he sees a great future for it.

The Bragstad Bros. Co., Inc., Canton, South Dakota, manufacturer of slush molds, mixers, tampers, reinforced concrete block machines, etc., has recently issued a new pamphlet describing their machines.

A book recently published by Shoemaker & Casparis, Newcomerstown, Ohio, sets forth the merits, earning qualities and labor saving advantages of their new improved automatic sand and gravel elevators. Testimony of those who have and are using these elevators is given in the book, and they state the results of the machines have been satisfactory.

The Griscom-Spencer Company wishes to announce that it is now selling agent for the Bundy Steam Trap and other specialties manufactured by the Nashua Machine Company, at Nashua, N. H. The Bundy Steam Traps are well and favorably known all over the world and we would be pleased to supply your readers with catalogs upon request.

The Sandusky Portland Cement Company, of Sandusky, O., has recently published a booklet devoted to a product manufactured exclusively by them, Medusa Waterproof Portland Cement. The booklet contains a list of various uses of this cement, results of tests showing the strength and durability of the cement, and several good photographs of buildings in which Medusa Portland cement was used. Among these is the Auditorium Natatorium at St. Louis. This is the largest swimming pool in the United States, being 100 by 185 feet.

**CLASSIFIED ADVERTISEMENTS**

Advertisements will be inserted in this section at the following rates:

For one insertion.....25 cents a line  
For two insertions.....45 cents a line  
For three insertions.....60 cents a line

Eight words of ordinary length make one line.

Headings count as two lines.

No display except the headings can be admitted. Remittances should accompany the order. No extra charges for copy of paper containing the advertisement.

Extract from letter September 11, 1911, from The Bartlett Supply Co., of Detroit, Mich.:

"—would also say that the little ad we ran in your paper on sale of brick press, brought us very quick results and at least ten opportunities of making sale of our press."

Result of a five line ad run in our Classified Section August 22, 1911.

**EMPLOYEES WANTED**

**A RELIABLE EXPERIENCED MAN**

Wanted to manage a lime plant of 6 kilns located in eastern Indiana. Advise if any experience with hydrating plant, give details of self and where formerly employed. Good salary to right person. Address 813, care ROCK PRODUCTS.

**EXPERIENCED MAN.**

Experienced man wanted to take charge of mixing department in wall plaster plant. Excellent opening for a capable party. Furnish references. State salary. Address Box 811, care ROCK PRODUCTS.

**EMPLOYMENT WANTED**

**WANTED.**

If you are in need of or wish to sell anything which comes under any of these classifications, write us. If you have something not coming under these classifications we will create one for you.

**STONE CRUSHING PLANTS.**

Civil engineer with nine years' experience in contracting work and quarry operation, having just finished lay out and erection of a large modern crushed stone plant, would like advisory position with firm contemplating quarry reorganization or extension. Address 806, care ROCK PRODUCTS.

**SUPERINTENDENT OR FOREMAN.**

Position wanted as superintendent or foreman of lime works, by a hustler of fifteen years' experience, capable of taking full charge of plant, including quarry, and can be depended at all times to keep things up to the minute, and in working order. Can furnish best of references from former employers and produce results. Address RESULTS, care ROCK PRODUCTS.

**BOOKKEEPER AND SALESMAN.**

Young man familiar with the lime and cement trade in Virginia and Carolinas, being five years with one house as bookkeeper and salesman, desires change. Address 810, care ROCK PRODUCTS.

**SUPERINTENDENT OR MANAGER.**

Position wanted. Can construct or operate sand, gravel or crusher plant. Have constructed dredges, operated with centrifugal pumps. Will be open for position October 1, 1911. Address 812, care ROCK PRODUCTS.

**CIVIL ENGINEER.**

Young C. E., 24, recent graduate of eastern university, desires position of any kind; salary and location no object. Address W. S. G., 250 North 15th St., Philadelphia, Pa.

**BUSINESS OPPORTUNITIES**

**SAND—LIME BRICK.**

**F. L. SAGE,**

252 Asylum St., Hartford, Conn.

CONSULTING SAND LIME PRODUCTS ENGINEER. Property examined. Sand analyzed as to adaptability in making sand lime brick. Complete designs made for plant and equipment. Estimates furnished for complete plant or any part thereof. Cost systems installed in new or old plants. Let me tell you why your plant is not running successfully and put it on a paying basis for you.

**PATENTS SECURED FOR INVENTIONS.**

C. L. Parker, ex-examiner U. S. patent office, 956 G St., Washington, D. C. Write for inventor's handbook.

**GRANITE.**

**WHITE, GRAY, LIGHT AND DARK RED.**

FELDSPAR, SILICA AND SAND. SPRINGS—WATER POWER.

Owner of 400 acres, with inexhaustible resources above specified, situated 65 miles southeast of the city of St. Louis, Missouri, one mile from railroad station, 18 miles from the Mississippi river, offers for sale part or all of the 400 acres to an energetic party or a company, and agrees to take interest for part of the purchase money. Appraised value, \$100,000; will take \$25,000. Apply to Owner in Belleville, Ill.

M. J. DOBSCHUTZ.

**AGENCY FOR BUILDING MATERIAL**

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## RAILROAD MATERIAL.

Atlas Car & Mfg. Co.  
Kilbourne & Jacobs Mfg. Co.  
Sackett Screen & Chute Co., H. B.

## REINFORCED CONCRETE CURB.

Steel Protected Concrete Co.

## ROOFING MATERIAL.

Carolina Portland Cement Co.  
Barrett Mfg. Co.

## SAND.

Kirkpatrick Sand & Cement Co.  
Ottawa Silica Co.  
Union Sand & Material Co.

## SAND AND GRAVEL WASHING PLANTS.

Buckbee Company, J. C.  
Dull & Co., Raymond W.

## SAND-LIME BRICK MOHY.

American Clay Working Mch. Co.

## SCREENS.

Beckley Perforating Co.  
Buffalo Wire Works.  
Butterworth & Lowe.  
Dull Co., Raymond W.  
Ersham, J. B., & Sons Mfg. Co.  
Johnson & Chapman Co.  
McLanahan Stone Machine Co.  
Power & Mining Mch. Co.  
Sackett Screen & Chute Co., H. B.  
Stephens-Adamson Mfg. Co.  
Sturtevant Mill Co.  
Traylor Engineering Co.  
Webster Mfg. Company.

## SCREEN SECTIONS.

Beckley Perforating Co.  
Johnson & Chapman Co.

## SEWER PIPE.

Houston Bros. Co.

## STEAM SHOVELS.

American Locomotive Co.  
The Marion Steam Shovel Co.  
The Vulcan Steam Shovel Co.

## STUCCO RETARDER.

Chemical Stucco Retarder Co.  
National Retarder Co.  
Ohio & Binns Retarder Co.

## TUBE MILLS.

Power & Mining Mch. Co.  
Smith & Co., F. L.  
Traylor Engineering Co.

## WATER PROOFING.

Barrett Mfg. Co.  
De Smet, George W.  
Carolina Portland Cement Co.  
Ceresit Waterproofing Co.  
Houston Bros. Co.  
Marsh Co.  
Maumee Chemical Co.  
McCormick Waterproof Portland Cement Co.  
Sandusky Portland Cement Co.  
Sherwin-Williams Co.  
Wardworth, Howard & Co., Inc.

## WEIGHING MACHINES.

Automatic Weighing Machine Co.



# THE CEMENT SHOWS

Second Annual in New York—Madison Square Garden, Jan. 29th—Feb. 3rd, 1912

Fifth Annual in Chicago—Coliseum, Feb. 21st—28th, 1912

First Annual in Kansas City—Convention Hall, March 14th—21st, 1912

## Public Expositions

of a commercial and industrial character are established agencies for the advertising, exploitation and marketing of goods.

They are patronized not only by private business interests but are recognized and supported in the case of Municipal, State and World's Fairs by the Government through its various branches.

### The Power of Such Public Expositions

For the advancement of commerce and industry is universally acknowledged

The Cement Shows have become fixed institutions for the development of the industries related to the use of concrete. The exhibits of representative concerns make the Shows the national markets for the cement industry.

## No Sales Campaign

is complete without a display at these Cement Shows. They come during the opening of the season; they are held when contractors are planning to purchase supplies and equipment—when active work is light, affording time for thoughtful study of contemplated purchases.

The Cement Shows offer opportunity for the personal cultivation of buyers and for the actual demonstration of material and machinery.

The systematic and intelligent following up of prospects at past Shows have in many instances made possible the full operation of manufacturing plants during the year.

### The Expense of Representation

at the Shows is slight in comparison with the cost of sales campaigns with the exhibition feature omitted.

## Architects, Contractors,

engineers, builders and material dealers are becoming increasingly cognizant of the value to them of these Cement Shows as market places for the examination and purchase of supplies, machinery and equipment.

No careful buyer should fail to inspect the orderly displays under the most favorable conditions for observation and comparison. The most substantial concerns, manufacturing the best and latest improved materials and devices submit their exhibits for critical scrutiny.

For full information address:

### Cement Products Exhibition Co.

72 West Adams Street  
Chicago



# Amatite ROOFING

## Mineral Surfaced— Needs No Painting

**E**VERYTHING about Amatite appeals to the man with common sense. He can see its superiority at once—the real mineral surface *which never needs painting*; the two layers of Pitch which is the greatest water-proofing material known; the two layers

of heavy Tarred Felt—all these contribute to the popularity of Amatite.

We can make Amatite better and cheaper than anyone else on account of our greater facilities and consequently we sell it at a surprisingly low figure.

Simply the fact that it needs no painting is enough to make a man sit up and take notice—especially the man who has spent time and money in painting and repainting smooth surfaced roofings.

Every dealer should push it.



## BARRETT MANUFACTURING COMPANY

New York  
Cincinnati

Chicago  
Kansas City

Philadelphia  
Minneapolis

Boston  
New Orleans

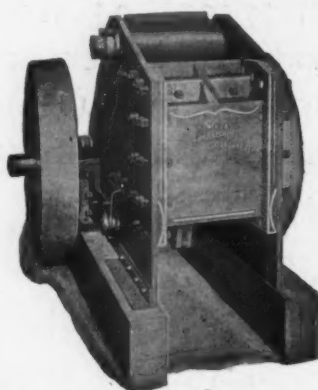
St. Louis  
Seattle

Cleveland  
London, England

Pittsburg

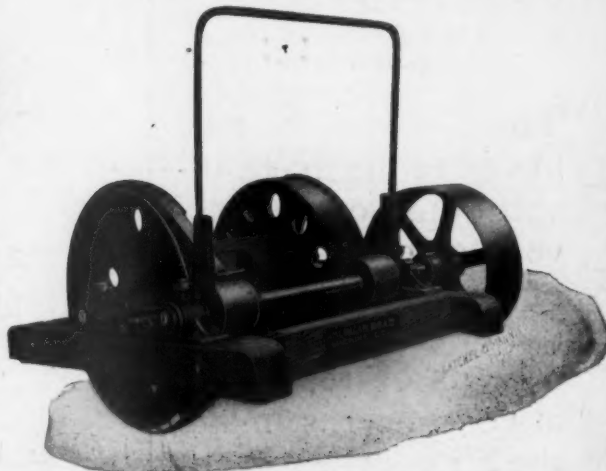
## Increase the Output and Efficiency of Your Quarry

By using CHAMPION Rock Crushers, Elevators, Screens, Dump Cars, Hoisting Drums, Wire Cable, Conveyors, Bin Chutes, Engines and Boilers. Everything for the quarryman furnished at right prices. Our Dump Cars are Durable and Economical. Made in two sizes.



Champion Steel Rock Crushers are made in six sizes, from 75 to 600 tons daily capacity. We design and equip quarry plants of any capacity. Our Crushers do more work at less cost for repairs than any others. Catalog will interest you.

Count on quality when you consider Champion Quarry Machinery. We aim to furnish nothing but the best. Our winding drum is a low-priced, durable and economical appliance for drawing material from the quarry to the Crusher. Powerful and always to be depended upon.



**The Good Roads Machinery Company, Kennett Square, Pa.**

Tell 'em you saw it in ROCK PRODUCTS



# Plant Improvements

## BEFORE WINTER SETS IN

You want the new Warehouse, Oil House, or Boiler and Engine House completed

## GET BUSY RIGHT NOW



Concrete  
Tile  
Lasts  
Forever;  
It's  
Fire Risk  
Is Zero

TYPE OF TILE AND CONCRETE BOILER HOUSE Size 20x38 feet, and 14 feet high.  
Complete bill of tiles furnished for this or similar building for \$175.50.

### BUILD WITH CONCRETE HOLLOW TILES AND ELIMINATE REPAIR BILLS

We sell all sizes and shapes that are needed in the construction of every type of building, and offer at this time tiles for an

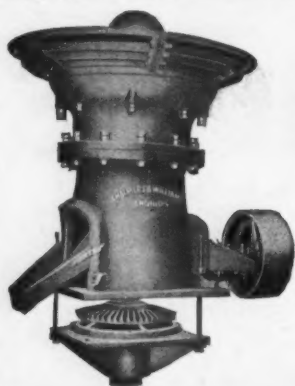
## 8 INCH WALL AT 12 CENTS PER SQUARE FOOT

Delivered on your siding in the Chicago Industrial District

Telephone Call, Harrison 8088, For Quick Action

# Chicago Structural Tile Co.

537 South Dearborn St., Chicago, Ill.



## Reduce the Cost of Crushed Stone

—by using—

## OUR GYRATORY CRUSHER

We can show these crushers in operation for two years, which, during that time have not cost one cent for repairs.

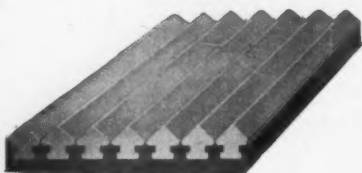
This crusher is the only crusher made with a ball and socket self aligning eccentric which relieves undue strain and reduces the amount of power required to operate.

Those who have investigated, have bought. Why don't you? Ask for catalog L-4.

We manufacture the Kennedy Gyratory Crusher under exclusive contract.

**CHALMERS & WILLIAMS** - - **Chicago Heights, Ill.**

## A Tempered Steel Jaw Plate for Blake Type Crushers



Canda Tempered Steel Crusher Jaw Plate

Patented March 31, 1908

☞ The Canda Tempered Steel Jaw Plate for Blake Crushers is composed of Forged and Rolled Chrome Steel Bars, cast-welded and also mechanically interlocked into a backing of tough steel—and the wearing face is tempered to extreme hardness. We are equipped to supply both corrugated and smooth face plates for all sizes and makes of Blake Crushers.

☞ The Canda method of cast-welding forged and tempered steel bars into a mild and tough Steel Backing, is adapted also to the construction of Cone Heads for Gyratory Crushers, Segments for Corrugated Rolls, etc., etc.

☞ Our products in this line are sold with our special guarantee that they *will wear longer, give better satisfaction and, at our price, prove more economical than any others now on the market.*

— Send for Descriptive Pamphlet —

Represented by

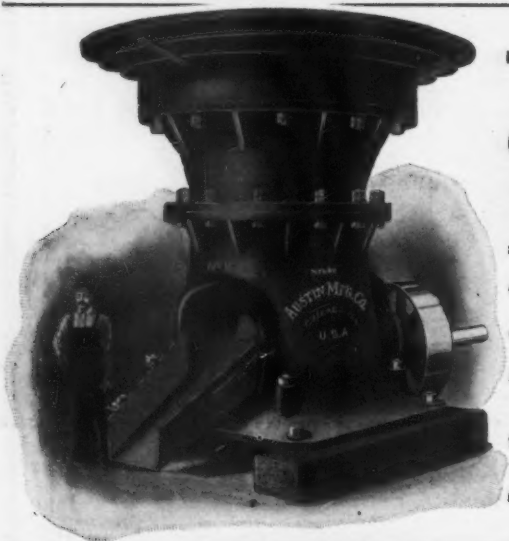
J. F. Spellman, 202 Century Building, Denver, Colo.

George T. Bond, Easton, Pa.

George W. Myers, San Francisco, Cal.

## CHROME STEEL WORKS

CHROME, N.J., U.S.A.  
FORMERLY OF BROOKLYN, N.Y.



## AUSTIN GYRATORY CRUSHER

The World's leading rock and ore breaker.

The only self lubricating Crusher.

The only Crusher having double countershaft bearing.

Simple construction, correct design.

Thousands in use.

Plans and specifications furnished for any sized plant.

Send for Catalogue No. 17.

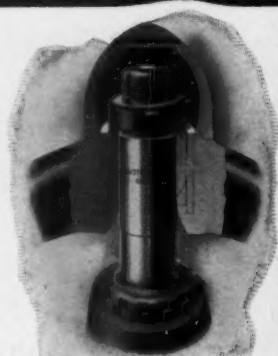
All experienced users recognize that the efficiency and durability of the suspension bearing as applied to Gyratory Crushers, depends upon locating the bearing at the point of least gyration or movement of the main shaft.

A perfect suspension can be made only by locating the bearing at the point where there is no movement of the shaft. That being a mechanical impossibility it follows that superiority is obtained in fixing the bearing at the point of least gyration of the shaft.

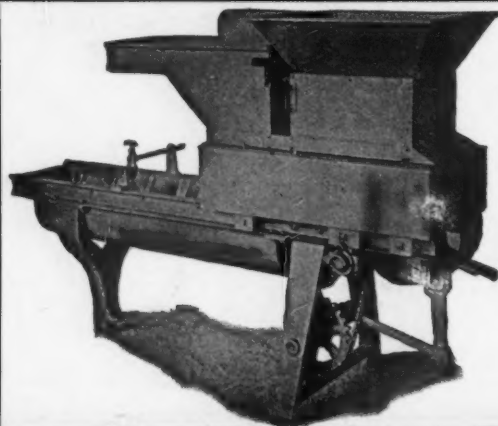
As the accompanying cut will show, the movement of the shaft at the point of suspension in the Austin Crusher is reduced to the minimum and practically eliminated. Consequently the highest possible degree of efficiency and durability is obtained.

**Austin Manufacturing Co., Chicago**

Mussens Ltd., Montreal, Can., Canadian Sales Agents.



New York City Office  
1682 FULTON BUILDING  
Hudson Terminal



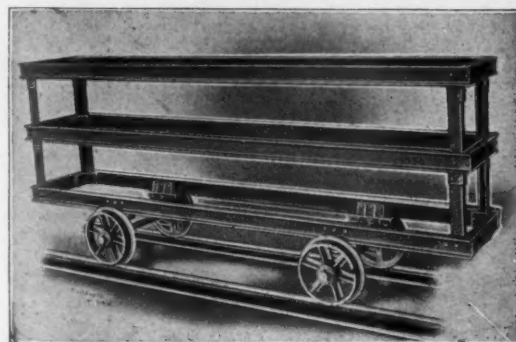
## "KENT" CONTINUOUS MIXER

"The Mixer that measures and Mixes"

"You fill the Hopper, the Mixer does the rest"

Simple, reliable, economical, durable and moderate in price

Write for Catalogue and Prices to  
**The Kent Machine Co.**  
306 N. Water St., Kent, O.



The "KENT" Block Cars, Transfer Cars, etc.

Tell 'em you saw it in ROCK PRODUCTS



# The Gardner Crusher Disintegrator and Pulverizer

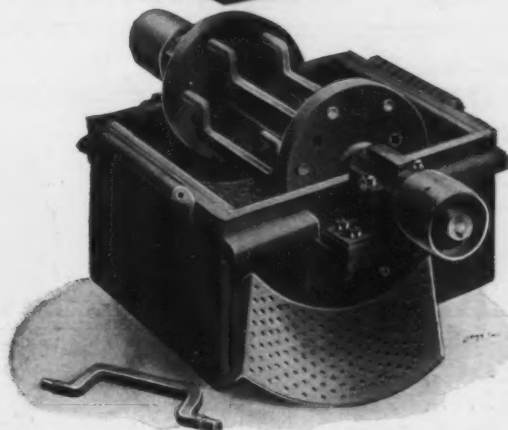
The great advantages of our CRUSHER are the following:

<b>High Productivity</b>	<b>Low Motive Power</b>
<b>Small Space Occupied</b>	<b>Strong Construction</b>
<b>Nominal Wear</b>	<b>Any Desired Fineness</b>
<b>Moderate Prices</b>	

The Gardner Crusher  
Disintegrator  
and  
Pulverizer

is adapted for

**Cement, Plaster,  
Quartz, Pyrites, Lime,  
Pozzolana Earth,  
Blast Furnace  
Cinders,  
Calcareous Stones,  
Porphyry, Granite,  
Emory, Corundum,  
Saggur from  
Potteries,  
Scoria, Hammerslag,  
Construction and  
Foundry Sand,  
Phosphates, Ochres,  
Bones, Sandstone,  
Silex, Bricks, Coal,  
Pitch, Glass, Enamels**



AN IDEAL PREPARATOR FOR THE TUBE MILL.

The Gardner Crusher  
Disintegrator  
and  
Pulverizer

has these advantages:

Is the most economical of all  
Crushers or Pulverizers.

Its price is very moderate.

Its capacity for pulverizing  
is enormous compared to its  
size and power required.

The *Gardner Crusher* requires  
no special foundations and can  
be put up anywhere.

Any fineness required can be  
obtained by merely changing  
the screens.

Its weight is very light, so  
the crusher can be sent to any  
remote country.

With the *Gardner Crusher*,  
in some cases, the complete  
equipment of a crushing plant  
will be the *Gardner Crusher* and  
the tube mill. With this kind  
of an installation the larger  
machines No. 2 or No. 3 would  
be used, eliminating the pre-  
liminary breaking machines.

## TRIALS

In order to give every facility to our customers, we  
have installed a Crusher for trials at our plant at  
532 West 34th Street, New York City. You have only  
to send us a sample of your crude material and a sam-  
ple of what you require when crushed. You should  
also specify the quantity that you desire per hour.

Our experienced engineer is at your disposal for  
any further explanation. *Send For Catalogue.*

# GARDNER CRUSHER CO.

532 WEST 34th STREET

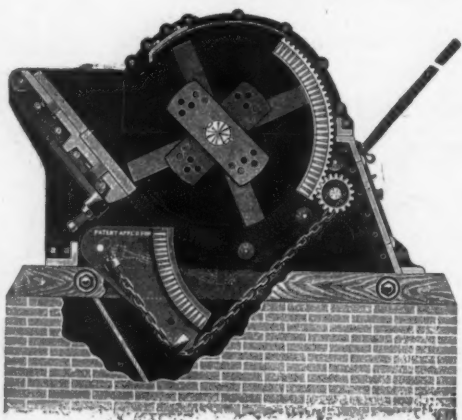
NEW YORK CITY, U. S. A.

Tell 'em you saw it in ROCK PRODUCTS

# WILLIAMS JUMBO CRUSHER

Will take 6 in. Limestone or Shale and reduce to 2 inch,—1½ inch,—1 inch,—¾ inch and finer.  
**1 No. 6 Recently Replaced 3 No. 5 Gyratories.**

"MANUFACTURED AND LICENSED UNDER 87 SEPARATE AND DISTINCT PATENTS."



WITH DUMP CAGE OPEN.

WORKS: 2701 N. Broadway, ST. LOUIS  
SAN FRANCISCO, 428 Monadnock Bldg.

Iola, Kansas, December 6th, 1910  
Williams Patent Crusher & Pulverizer Co., St. Louis, Mo.

Gentlemen: Your No. 6 Jumbo Crusher recently installed by us is handling about 100 tons per hour of crushed limestone from a No. 8 Gyratory Crusher, the largest pieces of which will average six inch cubes.

The capacity of our elevator is 115 tons per hour and the machine easily overloads the elevator. We are now installing an elevator of double the CAPACITY FOR THIS CRUSHER. Your guarantee was fifty tons per hour from this machine.

Your crusher reduces all of our material to three-quarter inches and finer, and the majority to one-quarter inch.

We have been operating the machine about eight weeks and find same most satisfactory.

Yours very truly, THE IOLA PORTLAND CEMENT CO., F. L. WOODS, Supt.

**MADE IN 8 SIZES—ALL PARTS ADJUSTABLE**

Ask Iola Portland Cement Co., Texas Portland Cement Co., Southwestern Portland Cement Company,—or us. Write for Bulletin 12.

**WE ALSO MAKE LIMESTONE GRINDERS**

## THE WILLIAMS PATENT CRUSHER & PULVERIZER COMPANY

**OLD COLONY BL'DG.——CHICAGO**

## FARREL ORE AND ROCK

# CRUSHER

USED IN ALL PARTS OF THE WORLD—LARGE RECEIVING CAPACITY—SPECIALLY DESIGNED AND CONSTRUCTED FOR HARDEST KIND OF WORK  
**COMPLETE CRUSHING PLANTS OUR SPECIALTY**

• SEND FOR CATALOGUE •

**EARLE C. BACON, ENGINEER.**

FARREL FOUNDRY & MACHINE Co. HAVEMEYER BUILDING, NEW YORK

## SINGLE ROLL CRUSHERS

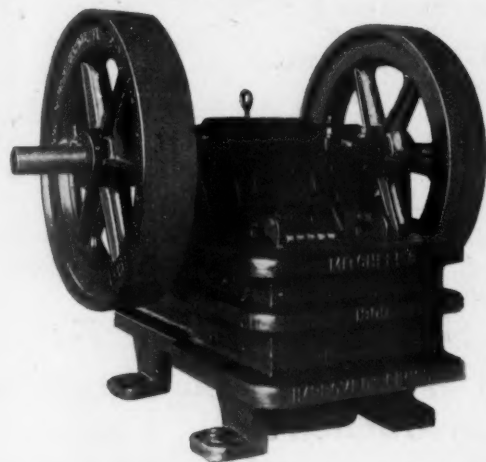
For Limestone, Phosphate Rock, Cinder, Etc.

**CAPACITIES FROM 10 TO 200 TONS PER HOUR**

More easily fed and makes less fines than either a jaw or gyratory crusher. Information and prices for the asking.

WE ALSO MANUFACTURE Double log washers, Ore jigs, Screens, All iron Elevators and Conveyors. Write for catalogue.

**McLanahan-Stone Machine Co. Hollidaysburg, Penna.**



**There Are Reasons for Mitchell Crusher Superiority**

Study the cross sectional view of the Mitchell Crusher and you will see at a glance why it is different from any other crushing machine. The motion of the movable jaw tends to produce a more uniform product with a very great saving in power. The crusher is adjusted in a jiffy to produce material in any size from 2½" even as fine as sand.

There are only 14 parts which greatly eliminates the possibility of wear and breakage. We can show you where you can profit by using a Mitchell Crusher.

**State your proposition clearly. Let us know what you have to crush, how fine you want to crush it, and what capacity you can use in a 10 hour day.**

You will be glad to have our 60-page catalog describing our 15 sizes. Send for catalog 7 R.

**EUREKA STONE AND ORE CRUSHER CO.**  
CEDAR RAPIDS, IOWA

Tell 'em you saw it in ROCK PRODUCTS



(COPY)

## NOTICE TO PUBLIC:

IN THE UNITED STATES CIRCUIT COURT OF APPEALS.

For the Third Circuit.

Williams Patent Crusher &amp; Pulverizer Co.,

Appellant.

vs.

Pennsylvania Crusher Company,

Appellee.

No. 1376.

## FINAL DECREE ON MANDATE.

On reading and filing in this Court the mandate of the United States Circuit Court of Appeals for the Third Circuit, bearing date April 24, 1911, in obedience to said mandate and in cognizance of the opinion of the said United State Circuit Court of Appeals:

1. It is this nineteenth day of June, 1911, hereby ordered, adjudged and decreed that claims 1 and 2 of letters patent No. 843,729, dated February 12th, 1907, granted to the Williams Patent Crusher & Pulverizer Company of St. Louis, Missouri, a corporation of Missouri, for Dumping Cages for Crushers and Pulverizers, are good and valid in law, and that Milton F. Williams, upon whose application said letters patent were granted, is the first and original inventor of the invention therein set forth.

2. It is further ordered, adjudged and decreed that the complainant, the Williams Patent Crusher & Pulverizer Company, is the sole and exclusive owner of all right, title and interest in and to said letters patent, and that the defendant, the Pennsylvania Crusher Company, has infringed said claims and on the exclusive rights of the complainant under said letters patent by making, using and selling crushing machinery containing the dumping cages and operating mechanism therefor set forth in said claim.

3. It is further ordered, adjudged and decreed that the complainant do recover of the defendant all of the profits, gains and advantages which the defendant has derived, received or made by reason of said infringement of said letters patent, and that the complainant do recover of the defendant any and all damages which the complainant has sustained by reason of such infringement.

4. It is hereby referred to Pierce McCutcheon, Esq., as a Master of this Court who is hereby appointed, pro hac vice, to take and state the amount of said gains, profits and advantages and to assess such damages and to report thereon with all convenient speed; and the defendant, its directors, officers, attorneys, clerks, servants and workmen are hereby directed and required to attend before said master from time to time as required and to produce before him such books, papers, vouchers and documents, and to submit to such oral examination as the Master may require; and the Master is instructed to consider the evidence already taken in this case, and the exhibits in evidence, and such further evidence as may be taken.

5. It is further ordered, adjudged and decreed that a perpetual injunction issue out of and under the seal of this court directed to the said defendant, the Pennsylvania Crusher Company, its associates, directors, officers, attorneys, clerks, agents, servants and workmen, enjoining, and restraining them and each of them from directly or indirectly making or causing to be made, using or causing to be used, or vending to others to be used in any manner, any articles, devices, apparatus, mechanism or machines, containing, embodying or employing said inventions or improvements set forth and claimed in claims 1 and 2, or from infringing upon or violating claims 1 and 2, of said letters patent in any way whatsoever.

6. It is further ordered, adjudged and decreed that Complainant do recover of the defendant its costs, charges and disbursements in this suit to be taxed, and that the question of increase of damages be reserved until the coming in of the Master's report.

---

All Williams Crushers and Grinders are protected by 87 U. S. and Foreign Patents.

Don't Purchase an Infringing Machine.

## The Williams Patent Crusher & Pulverizer Co.

WORKS:  
2705 N. Broadway  
St. Louis, Mo.

Old Colony Building  
CHICAGO

Tell 'em you saw it in ROCK PRODUCTS



# MAXECON

Means MAXimum of ECONomy

Years of experience with the assistance of our hundreds of customers has found THE SOLUTION OF GRINDING HARD MATERIALS. The MAXECON PULVERIZER combines highest EFFICIENCY, greatest DURABILITY and assured RELIABILITY. Uses the LEAST HORSE POWER per capacity. Embodies the features of our Kent Mill with improvements that make it MAXECON.

**WE DO NOT CLAIM ALL of the CREDIT for this achievement**

We have enjoyed the valuable suggestions of the engineers of the Universal Portland Cement Co. (U. S. Steel Corp.), Sandusky P. C. Co., Chicago Portland C. Co., Marquette Cement Mfg. Co., Western P. C. Co., Cowham Engineering Co., Ironton P. C. Co., Alpena P. C. Co. Castalia P. C. Co., Pennsylvania P. C. Co., and many other patrons.

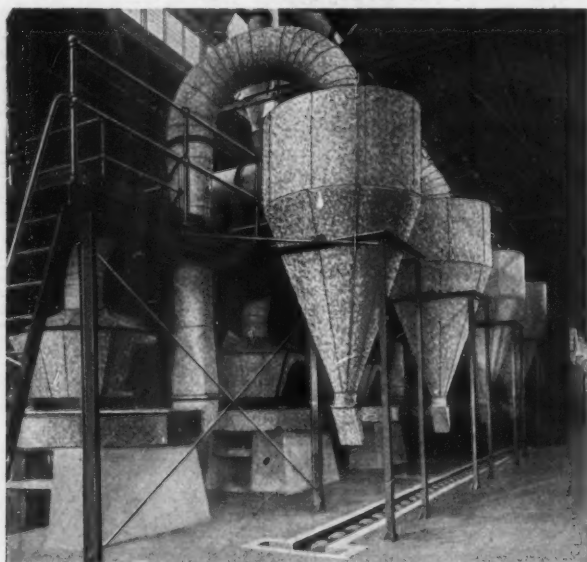
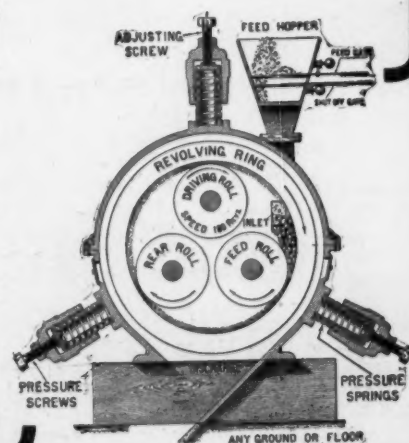
## THE RING WOBBLER

The FREE WOBBLING POUNDING RING instantly and automatically ADAPTS its position to the variations of work.

Its GRINDING ACTION is DIFFERENT than any other; besides the STRAIGHT rolling action of the rolls, the SIDE to SIDE motion of the ring makes the material subject to TWO crushing forces and DOUBLE OUTPUT results.

### KENT MILL CO.

170 BROADWAY, NEW YORK CITY  
LONDON, W. C., 31 HIGH HOLBORN  
CHARLOTTENBURG 5, WINDSCHEID STRASSE 31, BERLIN



Battery of Raymond Pulverizers and Air Separators

## These Raymond Pulverizers Save Hundreds of Dollars per Day

These mills grind any material to an impalpable powder, and instead of separating the powdered material through bolting cloths, reels or screens and then conveying it to point of delivery with expensive machinery, we eliminate all this by our patented exclusive process of separating and conveying by air suction, a method which immediately delivers the powdered product to the point desired without waste or tailings.

## RAYMOND PULVERIZING-SYSTEM AIR SEPARATING

is the simplest in construction; requires less power than others; never gets clogged; needs less repairs, and by keeping the powder confined within the system we prevent waste and poisoning of workmen. All Raymond Systems are installed on a guarantee basis. Write for our book "I," and tell us your pulverizing problems. Let us try to help you solve them. We design special machinery and methods for Pulverizing, Grinding, Separating and Conveying all powdered products. We manufacture Automatic Pulverizers, Roller Mills, Vacuum Air Separators, Crushers, Special Exhaust Fans and Dust Collectors.

RAYMOND BROS. IMPACT PULVERIZER CO., 577 Laflin St., CHICAGO, ILL., U. S. A.

PLEASE CUT THIS OUT

## REMINDER

to write to RAYMOND BROS. IMPACT PULVERIZER CO., 577 Laflin Street, Chicago, for their book "I" on Modern Methods of Pulverization and Air Separation.

Tell 'em you saw it in ROCK PRODUCTS





## Deep Blast Hole Drilling

Is accomplished more economically than by any other method with the

### "American" Drilling Machines

There is 40 years' experience behind these drills—they are standard. Where electric power is available, equipped with motor they form the most portable and economical drill for quarry use.

Equipped with any power they are backed by the experience and reputation of the world's oldest and largest builders of this kind of drilling machinery.

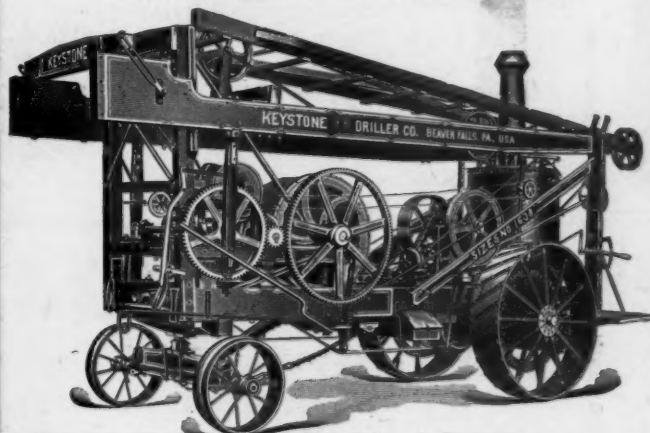
Tell us your blast hole requirements. We have 59 regular styles and sizes of machines for your selection, made in types to meet every possible condition of work.

Write for our new catalog No. 105, the most complete "Drill-Hole" catalog ever issued.

## THE AMERICAN WELL WORKS

General Office and Works: AURORA, ILL., U. S. A. Chicago Office: First National Bank Building

## For Big Blast Holes KEYSTONE CABLE DRILLS



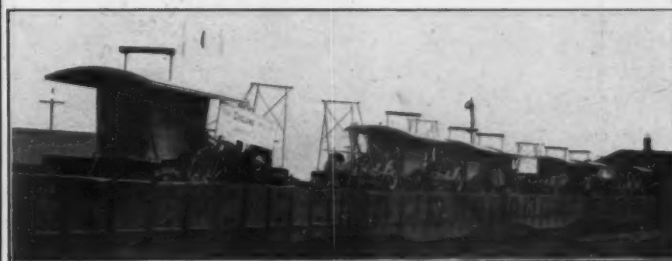
Catalog No. 4

### Keystone Traction Drill Co.

Monadnock Bldg.,  
CHICAGO

BEAVER FALLS, PA.,  
170 Broadway, New York

CARTHAGE,  
MISSOURI



Seven No. 14 Traction Drills.

THIS order was placed after trying out one of our drills for fourteen months in competition with seven machines of other makes; the seven other drills were discarded and Cyclones installed in their place.

If the Dolese & Shepard Company of Chicago found it profitable to discard the other machines and buy Cyclones you can save more than half the expense by buying Cyclone drills right from the start.

Why spend money experimenting when the other fellow has done that? We guarantee to drill more holes at less expense than any other drilling machine on the market. If you want us to prove it, just ask our competitors to meet us in your quarry.

### THE CYCLONE QUARRY DRILL COMPANY

New York Office, 50 Church St.  
Chicago Office, 419 Fisher Bldg.

ORRVILLE, OHIO



## HOWELLS' Celebrated Ball Bearing Heavy Geared Post Drills

For boring anything that  
an Auger will penetrate.

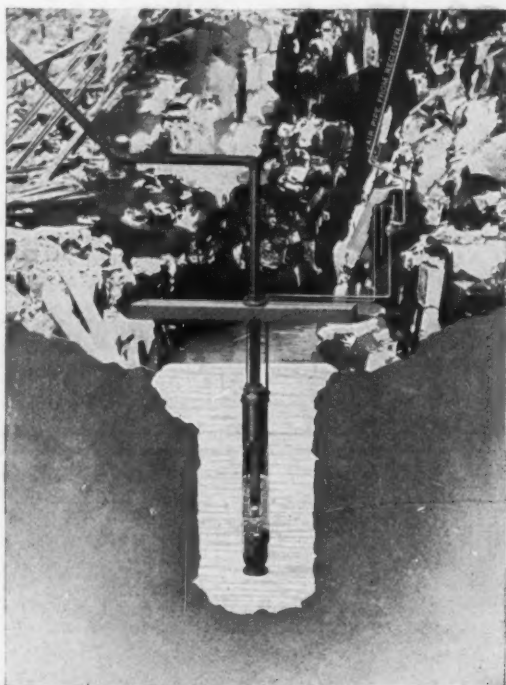
*Awarded Gold Medal, St. Louis.*

We make 40 different styles machines run by Hand, Compressed Air and Electricity for boring Fire Clay, Coal, Rock, Rock Salt, Gypsum and Plaster Rock. Send today for our handsomely Illustrated Catalogue.

### HOWELLS MINING DRILL CO., PLYMOUTH, PA. U. S. A.

(ESTABLISHED 1878.)

Tell 'em you saw it in ROCK PRODUCTS



## FLOATLESS SUMP PUMP

FOR

### Mine and Quarry Drainage

Operated by Compressed Air

No machined Pistons or Cylinders to wear out. Made of Standard Pipe or brass; galvanized or coated with acid-resisting paint.

Connect with existing pipe lines and "turn on the air."

Requires no oiling or attention

No pressure Regulating Valve required.

Can be equipped with Automatic Starting and Stopping Device.

Single Unit shown in illustration.

Two or more Units can be placed in same Sump or in series for compounding the lift.

Detailed information upon receipt of your pumping conditions.

**Weber Subterranean Pump Co.**

90 West Street, New York City

# MACHINERY

FOR

## Industrial Plants



We manufacture machinery for transmitting power, and for elevating and conveying materials in and about cement plants, rock crushing plants, lime plants, mortar works, plaster works, and other industries.

We manufacture screw conveyors, belt conveyors, and all sorts of chain and cable conveyors, for handling rock, lime, sand, etc.

We manufacture elevators, also, for handling the same kinds of material. Our lines include shafting, couplings, bearings, collars, pulleys, gears, rope sheaves, sprocket wheels, elevator buckets and bolts, steel elevator casings, etc.

We have our own foundry, sheet metal department and machine shop. We employ first-class help in all departments and use high-grade materials.

When you are in need of anything in our line, try us.

Catalog No. 34

**H. W. Caldwell & Son Co.**

17th St. and Western Ave., Chicago

Fulton Bldg., Hudson Terminal, No. 50 Church St.  
NEW YORK CITY

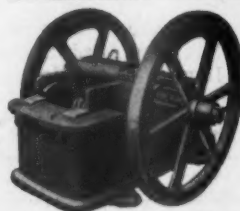
### What Nuttall Gears Will Do



Operate at 20 to 40% less power than is necessary to operate cast tooth gears—run smoothly and quietly in severe and continuous service—increase the efficiency of the machinery. These claims have been proven repeatedly by Nuttall gear users in all branches of the clay working industry. Accuracy, material, and wearing qualities guaranteed. Send in your specifications or blue prints for special trial proposition.

*When in a hurry, wire us.*

**Nuttall—Pittsburgh**



**Lewistown Foundry & Machine Co.**  
LEWISTOWN, PA.

Builders of heavy duty crushers and glass sand machinery. Glass sand plants equipped complete.

WRITE FOR PRICES AND CATALOG.

Tell 'em you saw it in ROCK PRODUCTS



## THE WEBSTER METHOD

of Handling Rock, Crushed Stone, Sand, Gravel, Cement, Etc.



is the efficient, economical and truly satisfactory way.

We make all classes of **Conveying** and **Elevating Machinery** for use in sand and gravel pits, crushed stone plants, quarries, cement plants and for concrete

contractor's work; revolving screens for sand and gravel.

**Webster Machinery** is giving highly satisfactory service all over the world for work of this character. It is sold under the slogan "*Quality First and Always*" and backs up this motto in service rendered. When you think of your handling problem, think of the solution—**WEBSTER**. Write for catalog.

**THE WEBSTER M'F'G COMPANY**  
TIFFIN, O.

NEW YORK—88-90 Reade St.

CHICAGO—815-817 Fisher Bldg.

## LOOK! LISTEN!

### LEVIATHAN SPECIAL-BLACK CONVEYOR BELTING

is a new belt that has been on the market but a few months. The demand for it has been so extraordinary that we have not up to the present time been able to meet it.

### With our new factory

just finished for the exclusive manufacture of this belt, we are now in position to take all orders, and make prompt shipment. This belt is the wonder of the age for use in stone, sand and gravel plants.

### Think of it!

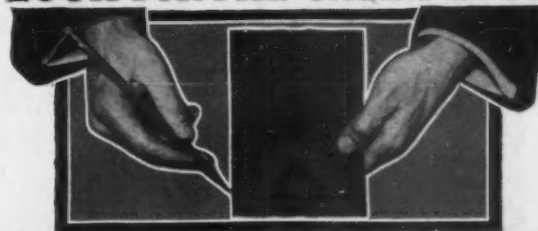
A canvas belt of the LEVIATHAN standard with a practically indestructible  $\frac{1}{8}$  inch coating on its face to resist the wear and tear of rough materials. Write us for further particulars.

## MAIN BELTING CO.

PHILADELPHIA CHICAGO NEW YORK BOSTON  
PITTSBURG MONTREAL SEATTLE

"It looks good on the face of it."

## LOOK FOR THE GREEN EDGE



# GANDY

## Stitched Cotton Duck Belting

HAS THIS EDGE PAINTED GREEN (See where I'm pointing.)

And here's the reason we have adopted the green edge as an identifying mark. We were the first to manufacture stitched cotton duck belting (34 years ago) and the reputation our belt has established has caused many imitators to spring up in an effort to reap some benefit from our success by making other stitched cotton duck belts and painting them red to look like the Gandy Belt.

Our customers suffer by this substitution, and in order to avoid further trouble of this kind in the future **THE GANDY BELT** while still remaining red will have one edge painted green.

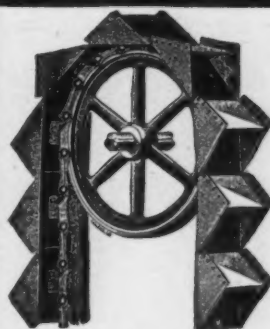
Remember there is only one **GANDY BELT**, and that is **THE GANDY BELT** made by The Gandy Belting Company, of Baltimore, Md., the oldest and largest manufacturers of stitched cotton duck belting in the world.

Remember, too, that while **THE GANDY BELT** is only one-third the cost of leather belting and 25% cheaper than rubber belting, it will do the work equally as well. It is the most durable and economical belt for Driving, Elevating and Conveying. We shall be glad to send samples and quote lowest prices on application.

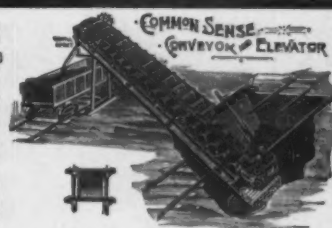
## The Gandy Belting Co.

744 West Pratt Street, Baltimore, Md.

New York Office, 88-90 Reade St.



Send for Catalog 25



THE GENERAL CRUSHED STONE CO.,

So. Bethlehem, Pennsylvania,

have been using one of our Common Sense Elevators for six years—capacity 400 tons an hour.

THE C. O. BARTLETT & SNOW CO. CLEVELAND OHIO

## "R. F. & C." Solid Woven Rubber Belt

Eliminates every rubber belt defect. Send for pamphlet "A Wireless On Rubber Belting."

**W. H. SALISBURY & CO., Dept. R**

CHICAGO

Established 1855

ILLINOIS

FOR IMMEDIATE SHIPMENT NEW AND REBUILT MACHINERY FOR CONTRACTORS AND QUARRY EQUIPMENT.

Two Rebuilt Western and Two Rebuilt New Era Elevating Graders, good as new. Twenty Rebuilt Western Wagons. Three 13-Ton Stone Bins. Two No. 2 Gates Crushers "D" Style. Rebuilt Jaw Crushers and Reversible Road Machines of Standard Makes.

HEADQUARTERS FOR Concrete Mixers, Wheelbarrows, Gasoline Engines, Gyratory and Jaw Crushers, Cars, Hoists and everything in Quarry Equipment. Write us for catalogue and prices.

THE WILLIAMS CONTRACTORS' SUPPLY CO., Columbus, Ohio.

Tell 'em you saw it in ROCK PRODUCTS

# TISCO

## Manganese Steel JAW PLATES, CHEEK PLATES

Toggle Plates and Toggle Bearings for

## JAW CRUSHERS

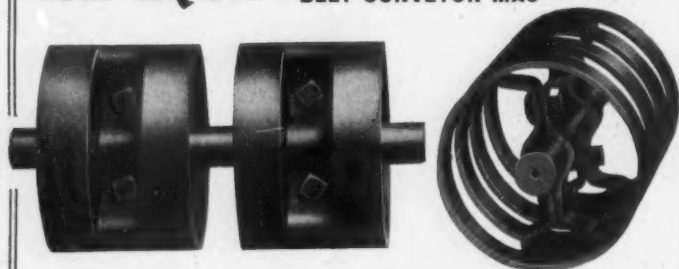
do not chip or break, wear longest and are most economical. Send for Bulletin 104.

*Does your banker use a TISCO Manganese Steel Safe?*

**Taylor Iron & Steel Co.**  
High Bridge, New Jersey

## WE EQUIP

STONE CRUSHING PLANTS  
SAND & GRAVEL WASHING PLANTS  
BELT CONVEYOR MACHINERY



Our belt idlers are steel. They are the strongest, most durable, most convenient idlers made. They are rapidly replacing cast iron pulleys. Write for particulars.

**RAYMOND W. DULL & CO.** Aurora, Illinois

## TITAN MANGANESE STEEL

UNEQUALED FOR WEARING PARTS OF JAW CRUSHERS  
GYRATORY CRUSHERS, CEMENT MACHINERY, COAL  
BREAKING MACHINERY, STEAM SHOVELS and DREDGES

SEND US YOUR INQUIRIES

**TITAN STEEL CASTING CO.,** NEWARK, N. J.

## BUFFALO WIRE WORKS CO.

BUFFALO, N. Y.

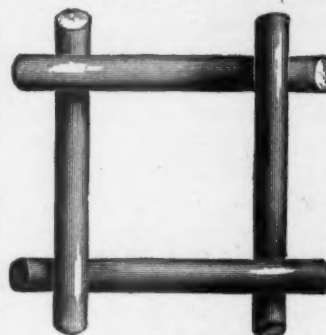
We make

## Wire Cloth

From the coarsest to the finest, for all purposes,

Also

WIRE CONCRETE REINFORCEMENT, WIRE  
WORK of all kinds,  
CORRUGATED WIRE  
"LATHING"



1-Inch Space, No. 4 Wire

Send for Our No. 416 Catalogue.

## SCREENS

If you are interested in

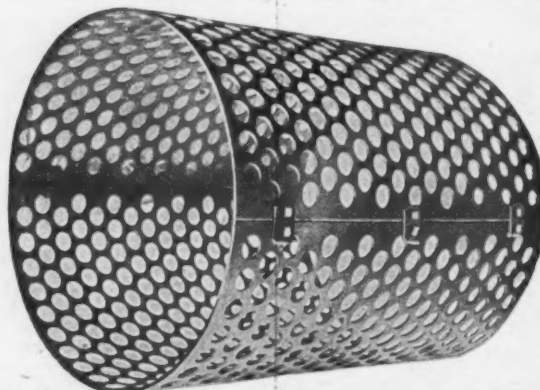
## Perforated Screens

and

**Have Tried All the Rest,  
Why Not Try the Best?**

Let us supply you with our screens, which are made from a special Hard Steel, especially adapted for stone, ore, gravel, sand, etc.

We Solicit  
Your Inquiries



**BECKLEY PERFORATING CO.,** Garwood, N. J.

IT WILL PAY YOU TO INVESTIGATE

**PRICE, MATERIAL and  
DELIVERIES Are Right**

Revolving Screens, Suspension Screens  
Trunion Screens, Shaker Screens  
Hexagonal Screens, Jump Screens

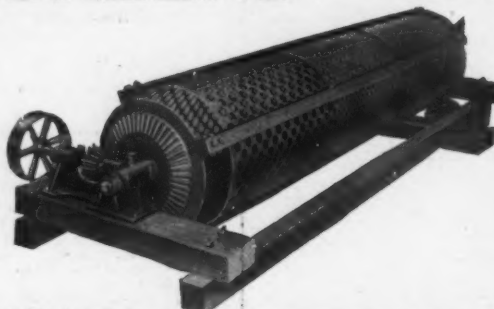
If you don't see the screen you are looking for here, ask for it. We make it.

Send for  
Circular

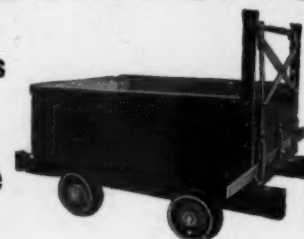
## CARS — SCREENS — ELEVATORS



Buckets  
Stone  
Skips



Switches  
Hoists  
Portable  
Track



We are prepared to quote you on anything for your Quarry or Gravel Plant. Before placing your order be sure and get our Catalogue 31-R, and also our Prices and Deliveries.

**1679 ELSTON AVENUE**

**SACKETT---CHICAGO**

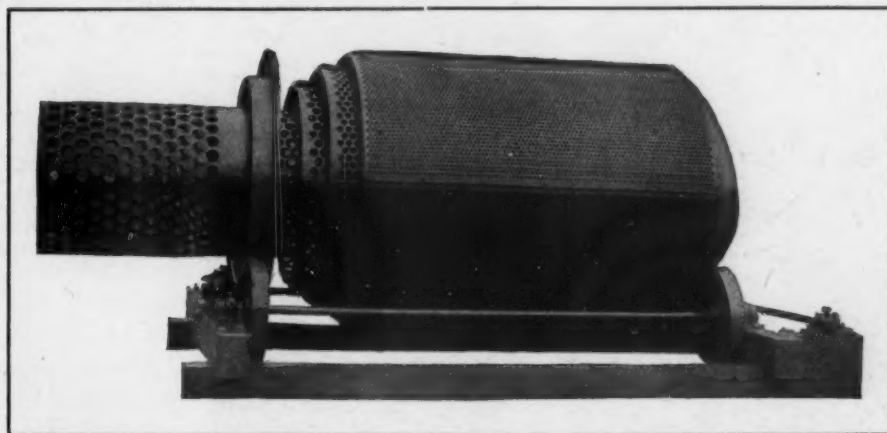
If you are "from Missouri" or anywhere else  
"We can show you."

**"SACKETT"** High Quality  
Low Price  
Prompt Delivery

Tell 'em you saw it in ROCK PRODUCTS



# JOHN O'LAUGHLIN'S SCREEN



made solely by Johnston & Chapman, is the

## ONLY SCREEN

on the market for wide-awake quarry-men and miners, who want to separate crushed granite, limestone or other minerals, gravel, sand, coal or coke. It will soon earn its cost in saving of repairs, and maintenance, and reduced power, and will do more and cleaner work than any other cylindrical screen of like area. No one can afford to keep old traps in use when the O'Laughlin installed

## NOW

will from the moment it starts give a better and larger product, and a big interest on your investment in continuous saving in cost of repairs, renewals, and power. For particulars, address:

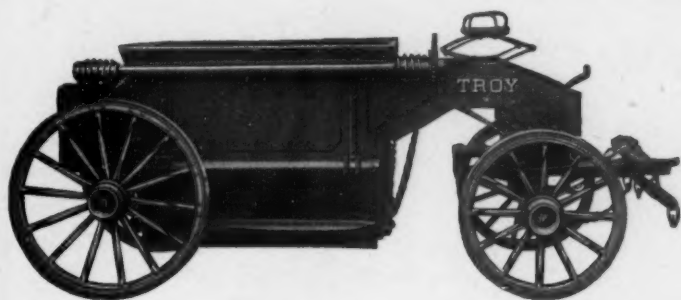
The advantages of these screens are described in detail in a circular which WE WILL MAIL TO ANY ADDRESS. Mr. John O'Laughlin, the inventor, has designed many notable improvements in rock-drilling, quarrying, crushing and screening machinery, and uses these improved screens in his own crushing plants, which others have declared "to be the most perfect in existence in every detail." The O'Laughlin Screen is an important factor in the most modern and perfect stone-crushing plant.

## JOHNSTON & CHAPMAN CO.

Corner Francisco and Carroll Ave., Chicago, Ill.

Perforators of Sheet Metals, Flat, Cylindrical, and Conical Perforated Screen Plates for Quarries, Mines, Reduction Works, Mills and all Industrial Purposes.

## GET SATISFIED



## Have You Seen the New TROY?

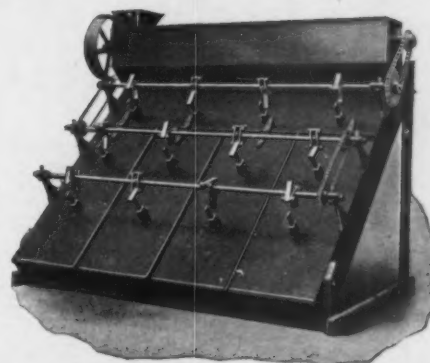
See it once and you can't be satisfied with any other Dump Wagon. Teamsters, horses, owners—all are friends of the TROY Special. Let us tell you why you need it too.

*Get Catalog 2-P. and the price.*

## THE TROY WAGON WORKS CO.

101 E. Race Street, Troy, Ohio

## NEWAYGO SCREEN



## SCREENS EVERYTHING SCREENABLE

from 4 to 200 mesh.

Less than 1 H. P. to operate. Large Output.

**PRICE, \$300**

More in use than any other Screen.

From 1 to 78 used by single concerns.

## SOLD ON "SALE OR RETURN" CONTRACT

If not satisfactory, even to the color of the paint, may be returned, as per our special "Sale or Return" offer.

Send for Offer and Catalogue.

## STURTEVANT MILL CO., Boston, Mass.

Tell 'em you saw it in ROCK PRODUCTS



Class 80-18-3 Atlantic Shovel removing surface earth from rock preparatory to excavating the rock to be used for dam of Keokuk & Hamilton Water Power Company at Keokuk, Iowa.

## DIRECT WIRE ROPE HOIST AN IMPORTANT FEATURE OF ATLANTIC STEAM SHOVELS

Wire rope hoist, found only on Atlantic Steam Shovels, exerts a direct pull on the dipper, increases the capacity of the shovel, lessens the number of wearing parts, and decreases cost of maintenance. It substitutes friction of a rope over only one large sheave for that of a chain with from five to seven small sheaves. Every sheave means more friction and less power. The friction of a chain is also greater than that of a wire rope. The less power lost in overcoming friction the more you have left for digging. The Atlantic loses the least in transmission from the engine to the dipper, and saves every possible ounce of power for actual digging. We have records showing what this means to you in a day's work.

Wire rope is as strong as chain and wears as long—sometimes longer. It is far safer and does not break without giving warning. It shows signs of wear by breaking of strands and can be replaced in one-third the time required for renewing or repairing a chain. Furthermore, having warning of wear it may be replaced out of regular working hours before breakage and therefore without interrupting the work. Chain breaks suddenly, causing suspension of work, until it can be repaired. This means loss of money to you.

DIRECT WIRE ROPE HOIST SAVES IN COST OF FUEL, AND IN COST OF REPAIRS.

## AMERICAN LOCOMOTIVE COMPANY 30 CHURCH STREET, NEW YORK

**McCormick Building, Chicago**  
**2101 Beaver Avenue, Pittsburg**

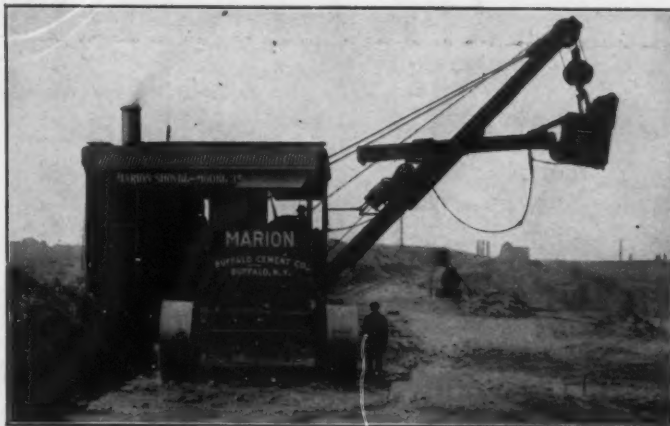
**401 Board of Trade Building, Scranton**  
**41 Ottawa Bank Bldg., Montreal, Canada**

**N. B. LIVERMORE & CO.; Salt Lake City; San Francisco; Seattle; Portland, Oregon**



# Marion Shovels for Rock Excavation

These shovels have been thoroughly tested and proven in all kinds of cement and rock work. They handle this most efficiently and economically. Write us and find out for yourself just how they do this.



Our Revolving Shovels are most popular where the output is limited, and economy is a vital consideration. One man can operate them.

These shovels can be mounted on railroad or traction wheels. They are built in three sizes, with dipper capacities, respectively, of  $\frac{1}{4}$  yd.,  $\frac{3}{4}$  yd., and  $1\frac{1}{4}$  yd.

Ours is the largest plant in the world manufacturing Excavating Machinery exclusively.

Let us figure with you before you order that new steam shovel!

STEAM SHOVELS    ELECTRIC SHOVELS    REVOLVING SHOVELS    DIPPER DREDGES    SCRAPER BUCKET EXCAVATORS

SEND TODAY FOR CIRCULARS 65 AND 67.

## The Marion Steam Shovel Company, Marion, Ohio

Chicago: 1442-3 Monadnock Block.

New York: 50 Church St.

Montreal: F. H. Hopkins & Co.



# VULCAN

## Heavy Duty Shovels

are built for heavy service. No work too hard for a VULCAN.

A VULCAN Heavy-Duty on the job will reduce the cost of your repair bills, up-keep and fuel consumption to the minimum and increase your output to the maximum.

They are built in all standard sizes from 45 to 120 tons, with  $1\frac{1}{4}$  to 5 cubic yard Dippers, and equipped for either Steam or Electric Power.

Let us figure with you on your requirements and prove to you at what a low cost you can handle your rock and other heavy material.

We also build the well known Little Giant Shovel of which over four hundred are in use throughout the country.

Revolving Shovels, Locomotive Cranes and Dipper Dredges.

Write today for full information and prices.

## THE VULCAN STEAM SHOVEL CO., Toledo, Ohio

EASTERN OFFICE, 50 CHURCH STREET, NEW YORK

Tell 'em you saw it in ROCK PRODUCTS



## Points of Interest Concerning The Ehrsam Wood Fibre Machine

The log feeds itself to the saw. As the log decreases in diameter the Speed of the log and of the feed **INCREASES AUTOMATICALLY**.

In other words, the Peripheral Speed remains constant.

The feed of the log to the saw is in direct proportion to the speed of the log. This automatic uniformity of feed **INSURES UNIFORMITY** of **FINE-NESS** in the **PRODUCT**.

No frictional devices are used, none being necessary.

All the working parts are planed. All of the gears are cut from solid steel. All of the parts are interchangeable and numbered, so that duplicate parts can be quickly obtained and easily put in position.

The Saw mandril is extra heavy and made of the best crucible steel.

The journals are chain oiling. No machine can be more substantially built. Write for full information.

Okeene, Okla., June 14, 1911.

J. B. Ehrsam & Sons, Enterprise, Kans.,

Gentlemen:—Some time ago I received a letter from you asking how the wood fibre machine you shipped us is doing. Will say it is the best I ever used. In regard to any suggestions I could make as to how it might be improved, will say that I can make none, as it is O. K.

Yours truly,

SOUTHWEST CEMENT PLASTER CO.,

Frank Dodge, Sup't.

Manufacturers of Jaw and Rotary Crushers for Gypsum, Vibrating Screens,  
Hair Pickers, Wood Fibre Machines, Calcining Kettles,  
Plaster Mixers, Power Transmission

## The Enterprise Vertical Burr Mill

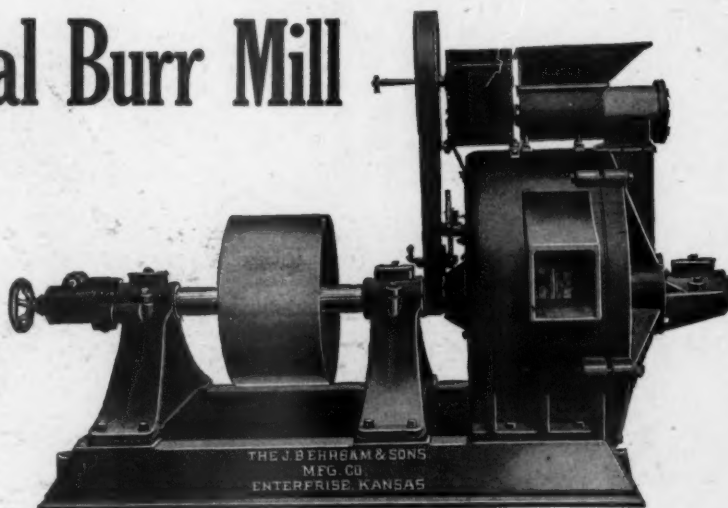
is especially designed for grinding gypsum, limestone, coal, coke, paint, rock, foundry facing, carbon, salt, and other similar substances.

It is **STRONG** and **DURABLY** built.

Has **INTERCHANGEABLE STONES**, which can be easily removed for dressing and replaced.

Is provided with our **POSITIVE CONTROLLABLE FEEDER**, which feeds an absolutely uniform stream into the mill at the required capacity.

**MANY OTHER  
ADVANTAGES.**



## The J. B. Ehrsam & Sons Mfg. Co.

Designers and Builders of

Complete Equipment for Plaster Mills

**ENTERPRISE, KANSAS, U. S. A.**

Tell 'em you saw it in **ROCK PRODUCTS**





**THE LOGICAL LATHING MATERIAL  
THE BEST IN HARD WALL PLASTER**

**Which is the  
Better Way  
for  
YOU?**

Using your time and energy in selling ordinary plastering materials with limited possibilities and small profits

**OR**

handling new, up-to-the-minute products for which a growing market has been created which carry with them the enthusiastic co-operation of a progressive institution and which insure you easily made and

constantly increasing profits? That's the question we want you to answer. Because that's the difference between selling the ordinary line of plastering materials and handling

**U. S. GYPSUM PRODUCTS**

We are not satisfied with unequalled quality alone. We aim to sell our products for the dealer as well as to him—we back him up first, last and all the time with courteous, careful attention, and complete and generous co-operation.

These are some of the reasons why you're missing something if you're not handling U. S. GYPSUM PRODUCTS. Some of the reasons why you should be selling

**SACKETT PLASTER BOARD**

Instead of lath

**U. S. G. WALL PLASTERS**

**U. S. G. FINISHING PLASTERS**

**PYROBAR GYPSUM TILE**

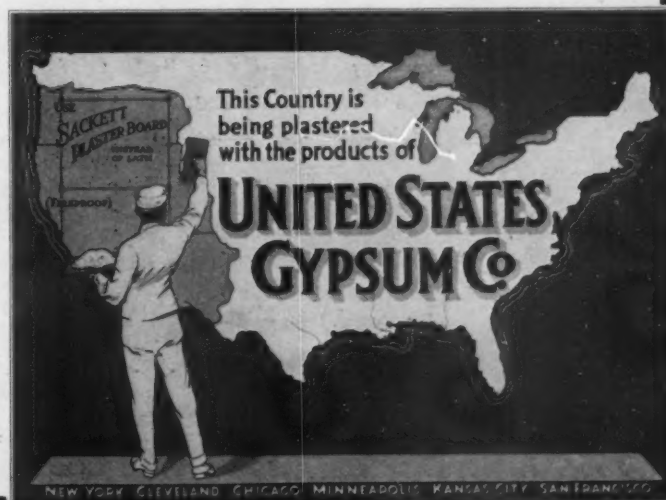
(For Fireproof Partitions)

**GYPSINITE STUDS**

(A Gypsum Fireproof Stud)

**ADAMANT EXTERIOR PLASTERS**

Because they mean more profits for you and greater satisfaction to the user. It will pay you to put our service and co-operation to test.



**Tell 'em you saw it in ROCK PRODUCTS**

Improved  
Modern  
Lath



Fire-Proof  
Insulating  
Sound-Deadening

# King's Fibrous Plaster Board

Standard Size 32' x 36'

THE RESULT OF "TRADE DEMANDS"

STRENGTHENED to stand the GREATEST STRAIN, to which such material is subjected  
TOUGHENED to a woody consistency to stand NAILING AND HANDLING

SHIPMENTS made to dealers of STRAIGHT OR MIXED CAR LOADS

## KING'S FIBROUS PLASTER BOARD

CALCINED PLASTER

MOULDING PLASTER

FINISHING PLASTER

WOOD FIBRE PLASTER

NEAT WALL PLASTER

SANDED PLASTER

MARBLE DUST

## PLASTER BOARD NAILS

**SERVICE** The location of our works at the greatest railroad terminus in the East and our several warehouses enable us to make **Prompt Shipments at all times.**

# J. B. KING & CO.

Plaster Board Department:  
17 State Street, New York, N. Y.

### WAREHOUSES:

Boston, Mass.	Providence, R. I.
Chester, Pa.	Hartford, Conn.
Norfolk, Va.	Buffalo, N. Y.
Brunswick, Ga.	

### WORKS:

New Brighton, Staten Island,  
NEW YORK

Tell 'em you saw it in ROCK PRODUCTS



## Dakota Plaster Co.

WE MAKE THE FAMOUS

"Black Hawk"

AND

"Dacotah"

Hair and Wood Fibred  
Plaster



Our Plaster is pure white; uniform in color; carries more sand, works easier and makes the hardest wall. Our Mill is thoroughly equipped with the most modern machinery, and we are always in a position to make prompt shipment. We guarantee every sack of our plaster.

Dakota Plaster Co. Rapid City, S. D.  
Black Hawk, S. D.

CUMMER CONTINUOUS PROCESS

FOR

CALCINING  
GYPSUM

NO KETTLES  
USED

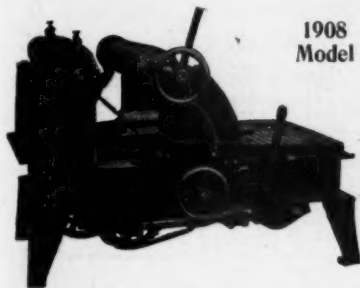
PLANTS IN  
OPERATION

Great Saving in Cost of Manufacture and Quality of  
Product Guaranteed.

The F. D. CUMMER & SON CO., Cleveland, O.

## The Shuart-Fuller Improved Fiber Machine

1908  
Model



Has an automatic, proportional, increasing feed, which keeps grade of fiber uniform from start to finish, and holds machine to highest possible rate of production for the grade of fiber and number of saws. Does not begin with fiber and end with dust, nor fall off in rate of production on each log, from 40 to 80 per cent as do the ordinary non-increasing feed machines. Works logs up to 24x24 inches. No royalty string attached to sale. Pay no attention to misrepresentations of our competitors, but write for descriptive circular and terms to

The Shuart-Fuller Mfg. Co.

ELYRIA, OHIO

THE SHUART-FULLER CO., Elyria, Ohio.

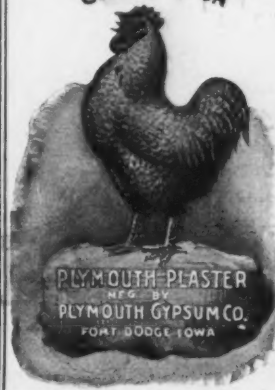
Gentlemen:—We are just in receipt of advice from our New Mexico plant wherein they state that the Wood Fiber Machine recently shipped by you is doing all that we have asked of it and running very fine.

ACME CEMENT PLASTER CO.

By Jas. R. Dougan, Sec.

St. Louis, June 17, 1907.

CROWING FOR



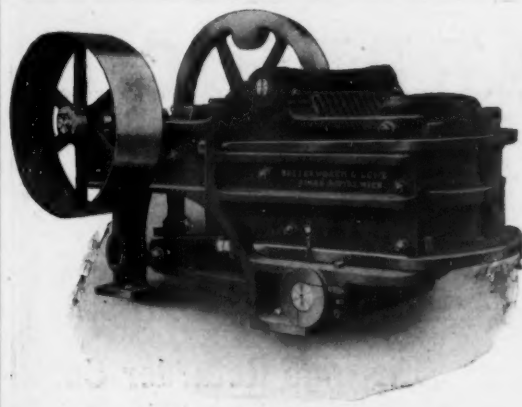
PLYMOUTH PLASTER  
WOOD FIBER PLASTER  
PLYMOUTH FIREPROOF  
PARTITION BLOCKS  
PLASTER BOARD  
STEEL STUDDING

THE QUALITY BRANDS

WRITE US FOR PRICES AND  
ADVERTISING MATTER

Plymouth Gypsum Co.

Fort Dodge, Iowa



Nippers—made in 3 sizes.

## Jaw and Rotary CRUSHERS

For all Rocks and Ores Softer than Granite

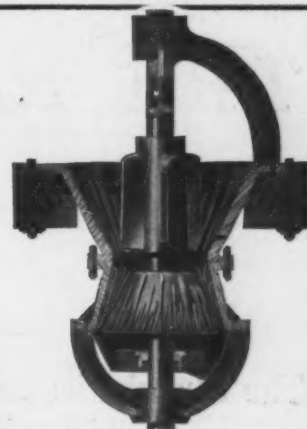
GYPSUM MACHINERY — We design modern Plaster Mills and make all necessary Machinery, including Kettles, Nippers, Crackers, Buhrs, Screens, Elevators, Shafting, etc.

Special Crusher-Grinders for Lime

Butterworth & Lowe

17 Huron Street,

Grand Rapids, Mich.



Crackers—5 sizes—many variations.

GET THE BEST

# Finest Line of Gypsum Machinery

MADE

KETTLE CRUSHER NIPPERS

ASK FOR CATALOG OF

MOGUL NIPPERS. OPEN DOOR POT CRUSHERS

Best Mills in the United States Have Them

McDONNELL BOILER & IRON WORKS, Des Moines, Iowa, U. S. A.

"Formerly Des Moines Mfg. & Supply Co."

Tell 'em you saw it in ROCK PRODUCTS

# PEERLESS

means without an equal and that is what our products are beyond the shadow of a doubt.

## Peerless Plaster-Board

The Best on the Market To-day

Peerless Plaster Board has no superior on the market today. Strength, durability, and uniformity in thickness with clean cut edges are its chief virtues.

Peerless Plaster Board finished with Peerless Plaster make a Peerless Wall. Builders' Supply Retailers say it is the best Plaster Board manufactured. If you are "from Missouri" write us today for sample and prices.

Write today for our  
PEERLESS PROPOSITION



Peerless Cement Plaster  
Peerless Wood Fibre Plaster  
Peerless Sanded Plaster  
Peerless Ready Finish  
Peerless Portland Stucco  
(Exterior Plastering)

We Ship Mixed Cars  
of Plaster and Board

Peerless Plaster Board comes in sheets 32 inches by 36 inches.

Peerless Plaster Board is a fire retardant and an efficient sound deadener.

Peerless Plaster Board is a non-conductor of heat and cold.

Peerless Plaster Board is an insurance against cracks, buckles, and lath strains.

Get in line with  
THE PEERLESS LINE  
WRITE TODAY

M. A. REEB, : Buffalo, New York

# THE NATIONAL RETARDER CO.

Mills at

Webster City, Iowa  
Port Clinton, Ohio

Successors to

The Chemical Stucco Retarder Co.

Webster City, Iowa

The Ohio Retarder Co.

Port Clinton, Ohio

The Binns Stucco Retarder Co.

Uhrichsville, Ohio

The same standard quality of retarder will be produced and marketed by the same people at the right price—only a change in name of corporation.

MAIL ORDER TO NEAREST MILL FOR PROMPT SERVICE

Tell 'em you saw it in ROCK PRODUCTS



# **== NIAGARA ==**

Wall Plasters Have Greater Covering Capacity, Work Smoother Under the Trowel and Have Greater Final Strength

**Niagara Neat Cement**

**Niagara Sanded Mortar**

**Niagara Wood Fiber (Wood Pulp)**

in 100-lb. Jute Sacks and 80-lb. Rope Paper Sacks. Mixed Car Loads of Wall Plasters, Hydrated Finishing Lime, Plaster Board, Land Plaster and Calcined Plaster for Finishing Purposes. These Products Mean Money to the Dealers in Builders' Supplies. Write today for prices.

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**BUFFALO, NEW YORK**

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**Which? == "Wheeling"**

**Why? == { Better Walls  
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Right Prices**

We want to make this, our tenth year in business, the biggest and best of all, both for our customers and ourselves mutually. Write us, Results will follow. Our booklet "Better Walls" for the asking.  
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Not the hardest, but the toughest and best Wall Plaster made—Can be applied with less labor. Has greater covering capacity than any other similar material

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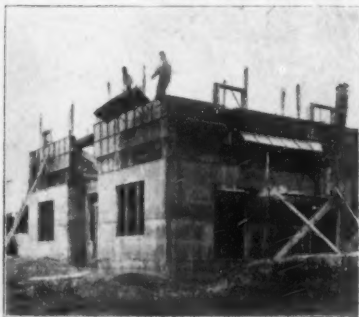
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See List on Page 12

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Note the "Swing Up", 30 feet (15 plates), raised in 10 minutes.

**Simple—Rigid—Indestructible**  
Any man can put it up. Adjustable to any dimensions and any thickness.

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All wedge connection—locked and unlocked by a stroke of the hammer. Adopted on hundreds of buildings for Real Estate Companies, Railroads, and Foreign Contracts.

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are used Exclusively at the above plant, which is a

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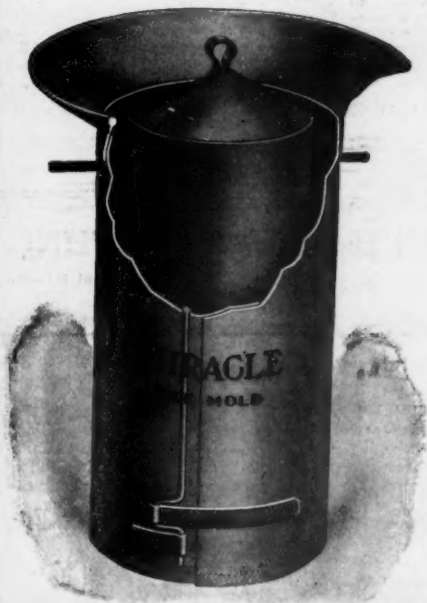
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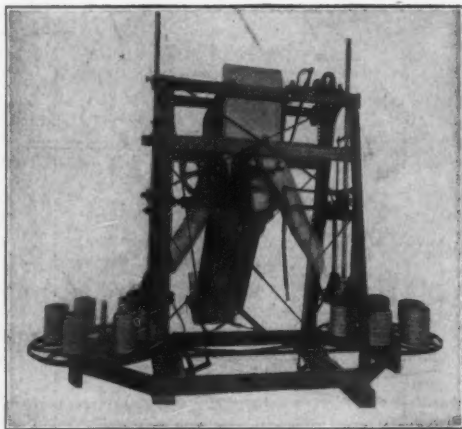


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The McCracken Double Tile Machine makes all sizes of cement tile from 4 to 16 in. in diameter at the rate of from 10 to 20 tile per minute. Also makes building blocks or construction tile 8x8x16 at the rate of 2000 to 3000 per ten hour day.

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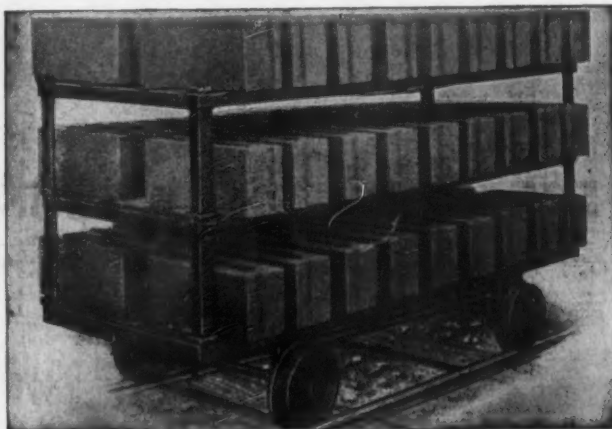
The machine has no cams and runs just as smooth at high speed as when running slow. Takes less labor per 1000 tile than any other machine.

Tile are packed so hard that the large sizes can be carried without the use of pallets. Machine is very simple and strong and runs very light, and elevator can be started and stopped without stopping the machine.

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Owing to increased manufacturing facilities we have tripled our output and reduced the cost of manufacture materially. On and after August 20th, 1911, Peerless Brick Machines will be sold at an **enormously reduced price.**

Our 1912 model, now ready, meets every requirement, tamps brick uniformly, makes them face down and is the most economical and successful brick machine on the market.

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The **Perfection Power Block Machine** is the only Power Block Machine on the market, making a Hollow Concrete Building Block under Heavy Pressure and at Great Speed.

Machines have been in constant use since July 1st, 1905, with practically no expense for repairs.

The machine handles sand, gravel, crushed rock, slag and coloring materials perfectly.

All materials accurately measured, thoroughly mixed and uniformly pressed under 200,000 pounds pressure.

Makes 8, 9 and 12x8x24 inch blocks in five faces, and fractional and angle blocks. Machine can be arranged to make Two Piece and Faced Blocks, if desired.

All machines delivered set up and put in operation to show a guaranteed capacity of 60 blocks (12x8x24 inch) per hour with five men.

Blocks perfectly cured in 24 hours in Vapor Curing Kilns of our own design. Full details, catalog, testimonials, etc., sent upon request.

**THE PERFECTION BLOCK MACHINE CO.**  
SIOUX FALLS, SOUTH DAKOTA.

## PERFECTION IN BLOCK MAKING

If you wish to attain this you should combine these three important features:

**Wet Process, Face Down,  
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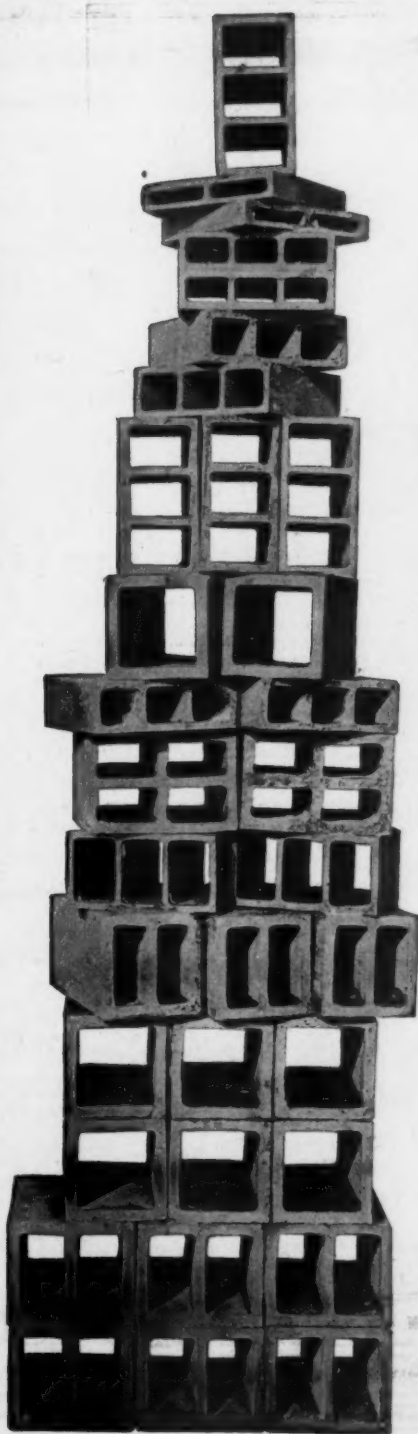
The **PETTYJOHN INVINCIBLE** Machine does this, and is the only machine that does. Tandem Invincible makes two blocks at once. Price \$65.00 and up. Single Invincible, \$35.00 and up. With our **Triple Tier Racking System** green blocks can be stacked three high direct from machine with inexpensive home-made rigging. Plans and blue prints free to customers. It economizes space, reduces off-bearing distance and above all insures slow, even, damp and perfect curing and bleaching.

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This question, which is usually first asked us by interested parties, is best answered by two facts:—1. During the year of 1909, the demand in Youngstown, Ohio, could not be satisfied, and (2) the plants capacity output is sold until the middle of the summer of 1910, in the City of Youngstown alone. In this connection it might be stated also that 4 tiles of our most common size, 8x8x16, can be manufactured from one cubic foot of concrete, with a labor cost of 50 per cent of the cost of concrete anywhere east of the Mississippi.

A weatherproof home of fireproof material can now be built for almost wooden construction cost. These points have been clearly demonstrated in Youngstown by practical use of *Pauly* Concrete Structural and Fireproofing Tile, in a variety of buildings. The result gained has not only been a financial success, but also an enviable position in the estimation of the entire building public.

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## Our 1910 Catalog

Gives the method of manufacture, fire and compression test data, and the endorsements of local architects and other building authorities. Also many other articles and illustrations of interest to the general public. May we send you, postpaid, a copy of our Catalog?

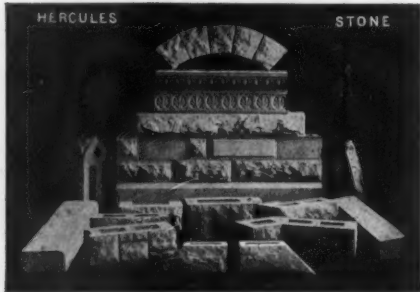
**The Concrete Stone & Sand Co.**  
Youngstown, Ohio.



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## Hercules Blocks

Sell on Sight



The dense non-porous blocks of Cement Stone made on

### Hercules Block Machines

satisfy the eye of the most critical architect or house builder. It is one of the chief merits of the Hercules Machine that it permits blocks to be made of WET concrete. This results in greater density, greater strength and greater water proofness. The Hercules is the only machine that expands with the requirements of your business. The only machine that makes dimension stone up to Six Feet long.

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THE MACHINE YOU WILL EVENTUALLY BUY

It is the most Durable Machine on the Market.

Produces the Most Lasting Cement Brick Made.

Operating Cost is Much Lower than that of other Machines

Has no Cogs to Clog and Wear Out.



No Time or Material Wasted.

Each Brick is Individually Tamped.

Hopper Returns Surplus to Mixing Box.

Either a Wet or Dry Mix may be used on a Gearless Machine—Wet Mix Advised.

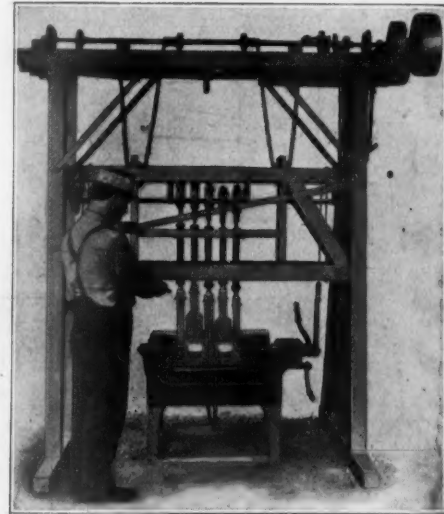
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has proven to the many users that it does more to improve the quality of block and reduce the cost than any machine ever put on the market for concrete block making. One of the great features of the Kramer Tamper is its speed. It will strike more blows per minute than twenty-five men can and will tamp a block in ten seconds, so dense, making the consistency so plastic, that more water can be used without sagging the blocks, when withdrawing the cores, and taking them to curing room. This machine will save you from \$8.00 to \$12.00 per day on labor and cement, and the blocks that are tamped in the afternoon are as uniform as those tamped in the morning. Write us to-day for full particulars.

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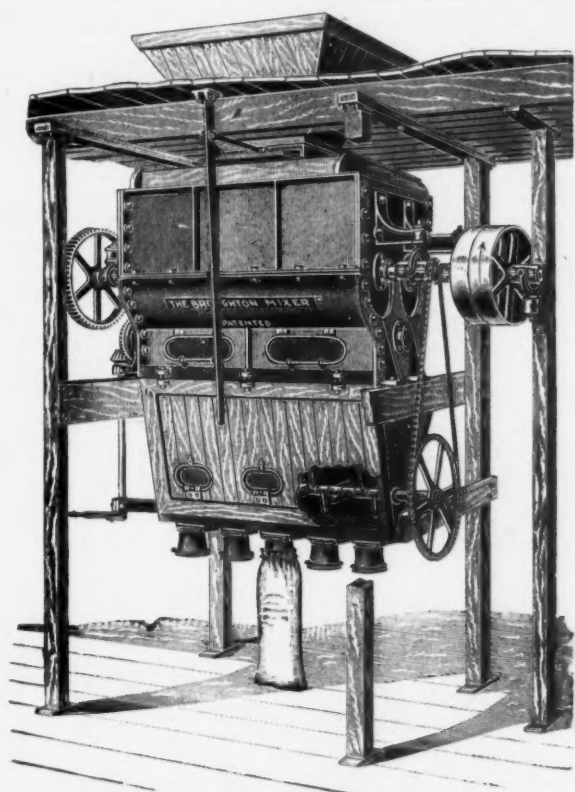
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Mixers of Plaster, Cement and  
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AT A PRICE SO SMALL IT WILL  
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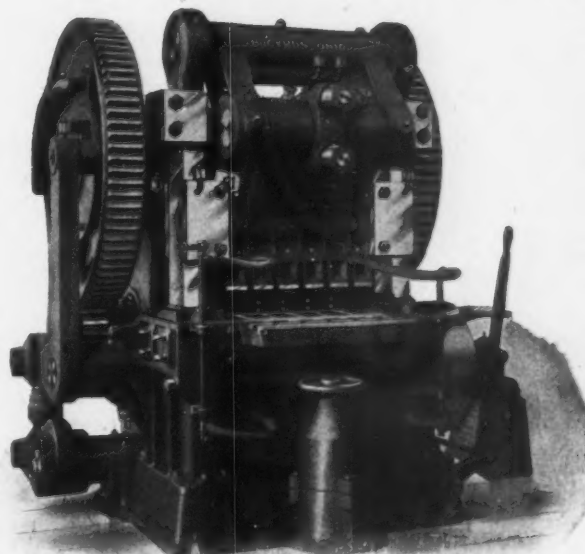


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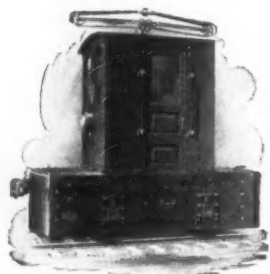
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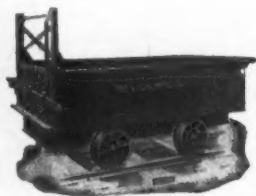


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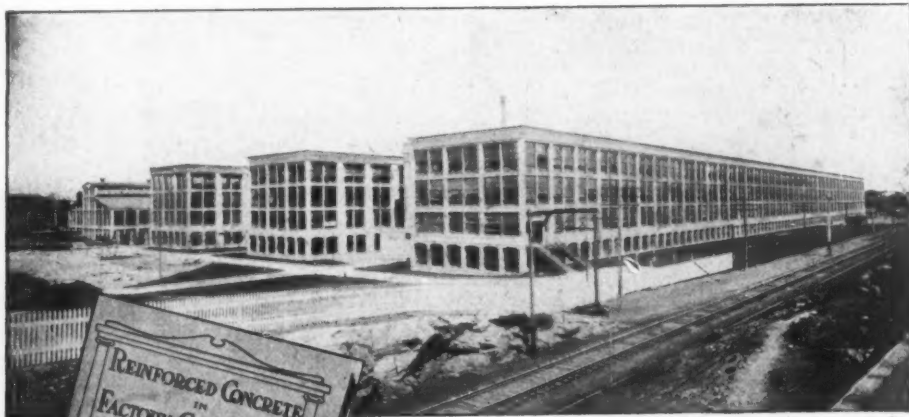


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